

NPS-OC-93-002

# NAVAL POSTGRADUATE SCHOOL

## Monterey, California



HYDROGRAPHIC DATA FROM CALIFORNIA WATERS  
BETWEEN THE SANTA ROSA/CORTES RIDGE  
AND THE FARALLONES.

MAY THROUGH OCTOBER 1990

by

John G. Locke *and others*  
Thomas A. Rago  
Curtis A. Collins  
Newell Garfield  
Paul F. Jessen

August 1993

Approved for Public Release; Distribution Unlimited

Prepared for:

Western Division  
Naval Engineering  
Facilities Command

Commander, Naval  
Oceanography  
Command

Naval Postgraduate  
School

FedDocs  
D 208.14/2  
NPS-OC-93-002

ed Doer  
208.14/2: NPS-OC-93-002 C 2

NAVAL POSTGRADUATE SCHOOL

Monterey, California 93943

RADM Thomas A. Mercer  
Superintendent

Harrison Shull  
Provost

This report was prepared for and funded by: Western Division, Naval Engineering Facilities Command; Commander, Naval Oceanography Command; and Naval Postgraduate School.

Reproduction of all or part of this report is authorized.

This report was prepared by:

**Hydrographic Data From California Waters  
Between the Santa Rosa/Cortes Ridge and the Farallones**

**May Through October 1990**

by

John G. Locke  
Thomas A. Rago  
Curtis A. Collins  
Newell Garfield  
Paul F. Jessen



# REPORT DOCUMENTATION PAGE

1. REPORT SECURITY CLASSIFICATION <b>Unclassified</b>		1b. RESTRICTIVE MARKINGS	
2. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION/AVAILABILITY OF REPORT Distribution for public release; distribution unlimited.	
4. DECLASSIFICATION/DOWNGRADING SCHEDULE			
5. PERFORMING ORGANIZATION REPORT NUMBER(S) NPS-OC-93-002		5. MONITORING ORGANIZATION REPORT NUMBER(S)	
6a. NAME OF PERFORMING ORGANIZATION NAVPGSCOL Department of Oceanography	6b. OFFICE SYMBOL (If applicable) OC	7a. NAME OF MONITORING ORGANIZATION  see continuation block on reverse	
7b. ADDRESS (City, State, and ZIP Code)  Monterey, CA 93943		7b. ADDRESS (City, State, and ZIP Code)  see continuation block on reverse	
8a. NAME OF FUNDING / SPONSORING ORGANIZATION see continuation block on reverse	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
10. SOURCE OF FUNDING NUMBERS			
PROGRAM ELEMENT NO.		PROJECT NO.	TASK NO.
WORK UNIT ACCESSION NO.			
see continuation block on reverse			
11. TITLE (Include Security Classification) Hydrographic Data From California Waters Between the Santa Rosa/Cortes Ridge and the Farallones. May through October 1990.			
12. PERSONAL AUTHOR(S) John G. Locke, Thomas A. Rago, Curtis A. Collins, Newell Garfield, and Paul F. Jessen			
13a. TYPE OF REPORT Technical	13b. TIME COVERED FROM May 90 TO Oct 90	14. DATE OF REPORT (Year, Month, Day) 1993 July	15. PAGE COUNT 143
16. SUPPLEMENTARY NOTATION			
17. COSATI CODES		18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)	
FIELD	GROUP	SUB-GROUP	
		Farallones, Santa Rosa/Cortes Ridge, CTD data, hydrographic data.	
19. ABSTRACT (Continue on reverse if necessary and identify by block number) This data report presents hydrographic (CTD) data from five cruises which spanned the region lying between the Santa Rosa/Cortes Ridge and the Farallon Islands and extends to about one hundred kilometers from the California Coast. A total of 144 CTD casts were made with concentration in three regions: the Farallones, the Monterey Bay area, and the Santa Rosa/Cortes Ridge Northern Gap at latitude/longitude 33.6N/119.8W (approximately) The report includes remarks concerning data processing and analysis.			
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS		21. ABSTRACT SECURITY CLASSIFICATION unclassified	
22a. NAME OF RESPONSIBLE INDIVIDUAL CURTIS A. COLLINS		22b. TELEPHONE (Include Area Code) (408) 656-2673	22c. OFFICE SYMBOL OC/Co

Reverse of report documentation page

continuation: Block 7a. See Block 8a below.

continuation: Block 7b. See Block 8c below.

continuation: Block 8a.

Western Division,  
Naval Engineering  
Facilities Command

Commander, Naval  
Oceanography  
Command

Naval Postgraduate  
School

continuation: Block 8c.

P.O. Box 727  
San Bruno, CA  
94066

NAS North Island  
San Diego, CA  
92136-5130

Department of Oceanography  
Monterey, CA  
93943-5000

## Table of Contents

	Page
List of Tables . . . . .	ii
List of Figures . . . . .	iii
Introduction . . . . .	1
Data Acquisition and Calibration . . . . .	1
Data Processing . . . . .	4
Data Presentations . . . . .	5
Data Availability . . . . .	5
Tabulated CTD Data (1990)	
Santa Rosa/Cortes Ridge; 5 - 7 May . . . . .	6
Farallones; 5 - 10 August . . . . .	19
Farallones; 27 August - 1 September . . . . .	67
Monterey Bay; 23 - 31 October . . . . .	107
Central California; 18 - 22 October . . . . .	120
References . . . . .	141
Initial Distribution List . . . . .	142

### List of Tables

Table	Caption	Page
1.	Comparison of CTD and Bottle Salinity Measurements Santa Rosa / Cortes Ridge	7
2.	Comparison of CTD and Bottle Salinity Measurements Farallones -- Early August	20
3.	Comparison of CTD and Bottle Salinity Measurements Farallones -- Late August	68
4.	Comparison of CTD and Bottle Salinity Measurements Monterey Bay	108
5.	Comparison of CTD and Bottle Salinity Measurements Central California	121

## List of Figures

Figure	Caption	Page
1.	Hydrographic Stations: Santa Rosa / Cortes Ridge	8
2.	Hydrographic Stations: Farallones -- Early August	22
3.	Hydrographic Stations: Farallones -- Late August	70
4.	Hydrographic Stations: Monterey Bay	109
5.	Hydrographic Stations: Central California	122



## INTRODUCTION

The CTD data included in this report were collected during five cruises between May and November 1990 aboard the research vessels Point Sur and USNS DeSteiguer. The region of study extended from the vicinity of the Santa Rosa/Cortes Ridge (latitude 33.5N) to the vicinity of the Farallon Islands (latitude 37.8N) and from near shore to about 100 km westward to sea. A total of 144 CTD casts were made to the bottom.

We thank the scientific participants and the ships' masters and crews for their capable, consistent contributions to the success of these surveys.

## DATA ACQUISITION AND CALIBRATION

Calibration procedures for the Santa Rosa/Cortes Ridge Cruise are discussed separately from the remaining four cruises because a different CTD was used.

For the Santa Rosa/Cortes Ridge Cruise, hydrographic data were acquired using the ship's CTD (USNS DeSteiguer). The instrument was calibrated by NAVOCEANO prior to the cruise, and we were not able to independently check the accuracy of the instrument. However, vertical profiles and T-S relationships appear consistent with historical data for the region (Churgin and Halminski, 1974).

For the remaining four cruises, hydrographic data were acquired using a Neil Brown Mark III-B CTD. A General Oceanics rosette sampler was attached to the CTD and was equipped with

twelve 5-liter Niskin bottles for in situ water sampling. The CTD sampling rate was 32 Hz, but the acquisition software employed a pressure latch filter which limited each cast to a uniform series of 4308 data points. On the 500 m casts this resulted in the acquisition of 8 or 9 data points per meter of water. CTD data were acquired only on the downcast with a winch speed of approximately  $30 \text{ m min}^{-1}$  to 150 m, and then  $60 \text{ m min}^{-1}$  to the bottom of the cast. The data were acquired using an HP200 computer and stored on 3.5-inch diskettes. Upon return to shore the data were transferred to 9-track tape and then processed on an IBM 3033 mainframe computer.

An underway data acquisition system with an HP-310 computer sampled 2-m temperature and salinity, air temperature, wind speed and direction, and visible and infrared radiation. The system uses Seabird temperature and salinity sensors, an R. M. Young Anemometer for the wind speed and direction, and Epply pyranometers for the visible and infrared radiation. 30-second averages were recorded on the computer's hard disk, transferred to 5.25-inch diskettes, and upon return, processed on a PC compatible computer.

The temperature, conductivity, and pressure sensors on the CTD were calibrated shortly before and after each cruise. The pressure calibration was carried out using a Chandler Engineering deadweight tester as a standard. A regression analysis using equally spaced pressures from 50 to 5000 dbar revealed a small linear difference between the standard and the CTD sensor; from this, we generated calibration constants (slope and intercept) which are presented

calibration constants (slope and intercept) which are presented with the data sets.

The temperature calibration was done using a Seabird temperature sensor as a standard. This standard sensor is recalibrated by the manufacturer approximately every six months. A temperature bath of 70 - 80 liters of fresh water in an insulated tub was used to compare the standard and sample sensors at 1°C increments from 0 - 20 °C. 30 data points were collected at each temperature and then averaged to yield a single point for each temperature. A regression analysis on the 21 data points revealed a small linear difference between the standard sensor and the CTD sensor from which we obtained calibration constants (slope and intercept), which are presented with each data set.

At each CTD station, the pressure offset (the surface pressure value returned by the CTD unit on deck) was recorded before and after the cast, and water samples were taken (usually at the surface, the 1000 dbar level, and the bottom) -- both for post cruise calibration. The CTD pressure, conductivity and temperature were noted as each sample was taken. These numbers, after applying the calibration coefficients and pressure offset, were used to calculate salinity and the results compared with the water sample salinities calculated using the Guildline Model 8400 Autosol in the laboratory.

## DATA PROCESSING

The on-board CTD acquisition software recorded the data on a 3.5-inch floppy disk. Initial processing consisted of identification of data points for which large jumps in value occurred, and replacement with interpolated values: severe spiking due to sampling irregularities was eliminated from the salinity signal with a search for vertical salinity gradients greater than  $1.0 \text{ psu m}^{-1}$ . Bad points were replaced using linear interpolation.

After the raw CTD data were transferred to the mainframe computer at the Naval Postgraduate School, the data were averaged over 2-m intervals and recorded as raw data. Each cast was shifted to compensate for the pressure offset, pre-cruise calibrations were applied, and salinities were computed from conductivity using the Sal-80 algorithm of Lewis and Perkin (1981). Time lag spikes were eliminated by discarding salinity data in regions where the vertical temperature gradient exceeded  $0.2 \text{ }^{\circ}\text{C m}^{-1}$  and replacing the discarded data with linearly interpolated values. The data files were visually examined, and subjectively adjusted (by hand) to correct outlying points missed during processing and to correct intervals over which the salinity makes abrupt step shifts. Outlying points were replaced with linearly interpolated values, and intervals of shifted data were corrected by adding a linear correction function over the shifted interval. This process has been found to remove steps in the data while preserving detail. Bottle salts and CTD salts are presented with each data set.

## DATA PRESENTATIONS

The five cruises in this report are presented separately. Tables, figures, and calibration constants which pertain to a cruise are included in the corresponding section. Density anomaly, specific volume, dynamic height, and spiciness are computed from the processed, corrected values of pressure, temperature, and salinity. The density anomaly ( $\gamma_\theta$ ) at atmospheric pressure was calculated from algorithms found in Volume 4 of the International Oceanographic Tables (UNESCO, 1987). The specific volume anomaly ( $\delta$ ) was computed with algorithms also found in Volume 4 of the International Oceanographic Tables (UNESCO, 1987). And spiciness ( $\pi$ ) was computed with algorithms of P. Flament (1986) using potential temperature.

The data sets are presented with the following parameters, symbols, and units:

P [dbar]	pressure
T [ $^{\circ}$ C]	temperature
S [psu]	salinity
$\gamma_\theta$ [ $\text{kg m}^{-3}$ ]	density anomaly
$\delta$ [ $10^{-8} \text{m}^3 \text{kg}^{-1}$ ]	specific volume anomaly
$\Sigma\Delta D$ [ $10^{-1} \text{m}^2 \text{s}^{-2}$ ]	dynamic height
$\pi$ [dimensionless]	spiciness

## DATA AVAILABILITY

These data may be obtained from the National Oceanographic Data Center, P.O. Box 271, La Jolla, CA 92037.

## Santa Rosa/Cortes Ridge

5 - 7 May

This survey was performed aboard the USNS DeSteiguer during the period 5 - 7 May 1990 as part of a two day Naval Reserve Training cruise. The survey was designed to examine the character of the flow through the northern gap in the Santa Rosa/Cortes Ridge, and it consisted of 10 CTD casts off the southern California coast (Figure 1). These data were collected using the ship's Neil Brown Mark III-B CTD. This instrument was calibrated by NAVOCEANO prior to the cruise, and we were not able to independently verify the pressure and temperature accuracy. However, vertical profiles and T-S relationships appear consistent with historical data for the region (Churgin and Halminski, 1974). Table 1 contains a comparison of final CTD salinities with bottle salinities sampled at the same stations and depths.

The scientific party consisted of CAPT Curtis Collins, USNR (chief scientist), LCDR Larry Phegley, LT Bernard Cohenour, LT Paul Oleshko, LT George Rainey, AG1 Susan Larocca, AG2 Kirk Poole, AG2 David Panzer, AG2 James Johnson, AG3 Colette Tolley, and AGAN Sharon Ballard, all of NORA 2276, NAVAIRES, NAS Pt. Mugu, California.

**Table 1. Comparison of CTD and Bottle Salinity Measurements  
Santa Rosa / Cortes Ridge**

The original data were acquired during the period  
5 - 7 May 1990 aboard the USNS DeSteiguer. Salinity  
values from the corrected CTD file are compared  
with bottle salinities from the same depth.

STATION	PRESSURE (dbar)	SALINITY (psu)		
		CTD	BOTTLE	DIFFERENCE
1	1053.4	34.467	34.462	0.005
2	845.9	34.446	34.446	0.000
2	847.2	34.446	34.440	0.006
4	348.1	34.247	34.257	-0.010
4	348.5	34.247	34.254	-0.007
5	473.2	34.303	34.305	-0.002
5	474.2	34.303	34.305	-0.002
6	544.2	34.306	34.312	-0.006
10	171.0	34.131	34.134	-0.003
10	171.5	34.131	34.129	0.002
11	328.8	34.256	34.254	0.002
11	329.5	34.256	34.258	-0.002
13	295.5	34.263	34.254	0.009
13	295.8	34.263	34.252	0.011

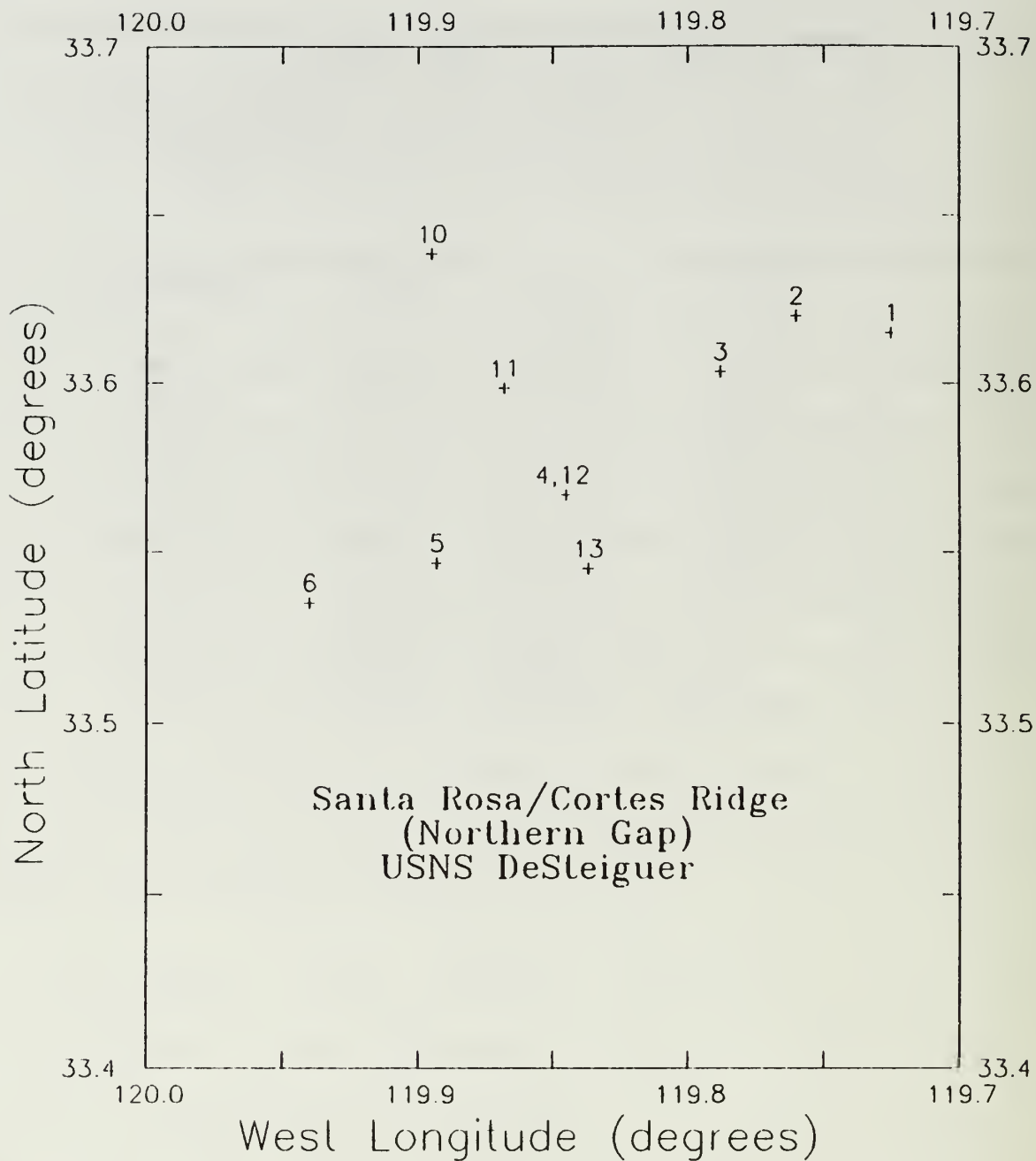


Figure 1. **Hydrographic Stations: Santa Rosa / Cortes Ridge**  
Positions shown were occupied by USNS DeSteiguer  
during the period 5 - 7 May 1990.

# DATA PRESENTATION

STATION: 1

DATE: 5/ 5/90

2118 GMT

LAT: 33° 36.9 N.

LON: 119° 43.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.943	33.591	24.447	347.40	0.000	1.46
5.0	16.920	33.588	24.451	347.22	0.017	1.45
10.0	16.760	33.581	24.483	344.37	0.035	1.41
15.0	16.586	33.584	24.526	340.39	0.052	1.37
20.0	15.038	33.546	24.842	310.44	0.068	0.99
25.0	12.682	33.514	25.305	266.36	0.082	0.46
30.0	12.254	33.506	25.382	259.20	0.095	0.37
40.0	11.314	33.577	25.613	237.46	0.120	0.25
50.0	11.063	33.625	25.695	229.82	0.144	0.24
60.0	10.585	33.711	25.847	215.63	0.166	0.22
70.0	10.240	33.761	25.945	206.42	0.187	0.20
80.0	9.982	33.873	26.077	194.10	0.207	0.24
100.0	9.496	33.935	26.206	182.19	0.244	0.21
120.0	9.391	33.956	26.240	179.37	0.281	0.21
140.0	9.463	34.055	26.307	173.51	0.316	0.30
160.0	9.125	34.104	26.400	165.01	0.350	0.28
180.0	8.996	34.121	26.434	162.09	0.383	0.27
200.0	8.761	34.157	26.499	156.23	0.415	0.26
250.0	8.270	34.212	26.619	145.65	0.490	0.23
300.0	7.891	34.231	26.691	139.52	0.561	0.19
350.0	7.396	34.266	26.790	130.68	0.628	0.14
400.0	7.080	34.282	26.848	125.78	0.692	0.11
450.0	6.894	34.293	26.882	123.15	0.754	0.10
500.0	6.622	34.312	26.934	118.73	0.815	0.07
550.0	6.240	34.328	26.998	113.05	0.873	0.04
600.0	5.989	34.345	27.043	109.12	0.928	0.02
650.0	5.819	34.355	27.073	106.77	0.982	0.00
700.0	5.586	34.368	27.112	103.33	1.034	-.02
750.0	5.352	34.384	27.153	99.73	1.085	-.03
800.0	4.971	34.410	27.218	93.52	1.134	-.05
1000.0	4.300	34.463	27.336	83.25	1.307	-.09
1051.5	4.247	34.467	27.345	82.76	1.350	-.09

STATION: 2 DATE: 5/ 5/90 2241 GMT

LAT: 33° 37.2 N. LON: 119° 45.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.942	33.573	24.434	348.69	0.000	1.45
5.0	16.930	33.572	24.436	348.61	0.017	1.44
10.0	16.837	33.573	24.458	346.69	0.035	1.42
15.0	16.344	33.559	24.563	336.91	0.052	1.29
20.0	15.033	33.544	24.843	310.35	0.068	0.98
25.0	12.698	33.525	25.311	265.88	0.083	0.47
30.0	12.232	33.515	25.393	258.13	0.096	0.37
40.0	11.491	33.579	25.582	240.39	0.121	0.28
50.0	10.847	33.647	25.751	224.53	0.144	0.22
60.0	10.440	33.731	25.888	211.70	0.166	0.21
70.0	10.337	33.755	25.924	208.47	0.187	0.21
80.0	10.042	33.813	26.020	199.55	0.207	0.21
100.0	9.652	33.848	26.113	191.06	0.246	0.17
120.0	9.533	34.006	26.256	177.88	0.283	0.27
140.0	9.374	34.064	26.328	171.47	0.318	0.29
160.0	9.080	34.100	26.404	164.58	0.351	0.27
180.0	8.847	34.149	26.479	157.77	0.384	0.27
200.0	8.639	34.168	26.527	153.55	0.415	0.25
250.0	8.216	34.217	26.630	144.53	0.489	0.23
300.0	7.773	34.240	26.715	137.14	0.560	0.18
350.0	7.422	34.255	26.778	131.84	0.627	0.14
400.0	7.202	34.268	26.820	128.52	0.692	0.12
450.0	6.922	34.292	26.878	123.61	0.756	0.10
500.0	6.632	34.302	26.925	119.60	0.816	0.07
550.0	6.276	34.325	26.991	113.75	0.874	0.04
600.0	6.087	34.336	27.024	111.08	0.931	0.02
650.0	5.777	34.355	27.078	106.22	0.985	0.00
700.0	5.316	34.385	27.158	98.63	1.036	-.03
750.0	4.911	34.414	27.228	91.98	1.083	-.06
800.0	4.625	34.434	27.276	87.43	1.128	-.07
845.6	4.485	34.446	27.301	85.30	1.167	-.08

STATION: 3

DATE: 5/ 5/90

2353 GMT

LAT: 33° 36.2 N.

LON: 119° 47.3 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.707	33.580	24.494	342.95	0.000	1.40
5.0	16.664	33.578	24.503	342.31	0.017	1.38
10.0	15.621	33.585	24.745	319.40	0.034	1.15
15.0	13.877	33.542	25.087	286.89	0.049	0.73
20.0	12.839	33.547	25.300	266.74	0.063	0.52
25.0	12.191	33.570	25.443	253.24	0.076	0.41
30.0	11.535	33.580	25.574	240.92	0.088	0.29
40.0	10.998	33.617	25.701	229.08	0.112	0.22
50.0	10.542	33.659	25.814	218.49	0.134	0.17
60.0	10.108	33.737	25.949	205.86	0.155	0.16
70.0	9.840	33.812	26.053	196.13	0.175	0.17
80.0	9.744	33.879	26.121	189.87	0.194	0.21
100.0	9.602	33.998	26.238	179.19	0.231	0.28
120.0	9.479	34.046	26.296	174.08	0.266	0.29
140.0	9.251	34.086	26.365	167.89	0.301	0.29
160.0	8.960	34.125	26.442	160.94	0.333	0.27
180.0	8.773	34.141	26.484	157.25	0.365	0.25
200.0	8.624	34.164	26.526	153.61	0.396	0.25
250.0	8.311	34.217	26.617	145.89	0.471	0.24
300.0	7.978	34.246	26.690	139.70	0.542	0.21
350.0	7.644	34.253	26.745	135.15	0.611	0.17
400.0	7.329	34.264	26.799	130.62	0.677	0.13
450.0	6.660	34.302	26.921	119.27	0.740	0.07
500.0	6.475	34.316	26.957	116.44	0.799	0.06
511.7	6.429	34.319	26.965	115.74	0.813	0.05

STATION: 4 DATE: 5/ 6/90 0130 GMT

LAT: 33° 34.0 N. LON: 119° 50.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.778	33.557	24.460	346.20	0.000	1.39
5.0	16.605	33.551	24.495	342.98	0.017	1.35
10.0	16.586	33.577	24.520	340.80	0.034	1.36
15.0	16.001	33.569	24.648	328.77	0.051	1.22
20.0	14.676	33.551	24.927	302.36	0.067	0.91
25.0	13.883	33.560	25.100	285.97	0.082	0.74
30.0	13.251	33.563	25.231	273.61	0.096	0.61
40.0	11.845	33.585	25.520	246.27	0.122	0.35
50.0	11.052	33.591	25.671	232.13	0.146	0.21
60.0	10.341	33.717	25.894	211.13	0.168	0.18
70.0	10.254	33.822	25.991	202.10	0.188	0.25
80.0	10.162	33.871	26.045	197.18	0.208	0.27
100.0	9.698	33.988	26.215	181.45	0.246	0.29
120.0	9.487	34.043	26.293	174.40	0.282	0.29
140.0	9.313	34.074	26.345	169.79	0.316	0.29
160.0	9.095	34.096	26.398	165.15	0.350	0.27
180.0	8.878	34.124	26.455	160.06	0.382	0.26
200.0	8.747	34.156	26.501	156.07	0.414	0.26
250.0	8.226	34.226	26.636	143.95	0.489	0.24
300.0	7.961	34.241	26.688	139.83	0.560	0.21
347.6	7.775	34.247	26.721	137.45	0.626	0.18

STATION: 5

DATE: 5/ 6/90

0223 GMT

LAT: 33° 32.8 N.

LON: 119° 53.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.614	33.582	24.517	340.74	0.000	1.37
5.0	16.528	33.574	24.532	339.54	0.017	1.35
10.0	16.505	33.580	24.541	338.76	0.034	1.35
15.0	16.063	33.569	24.633	330.15	0.051	1.24
20.0	13.863	33.562	25.105	285.37	0.066	0.74
25.0	12.440	33.564	25.391	258.20	0.080	0.45
30.0	11.434	33.590	25.600	238.39	0.092	0.28
40.0	10.986	33.661	25.737	225.63	0.115	0.25
50.0	10.775	33.737	25.833	216.67	0.137	0.27
60.0	10.707	33.757	25.862	214.22	0.159	0.28
70.0	10.391	33.840	25.981	203.05	0.180	0.29
80.0	10.237	33.893	26.049	196.82	0.200	0.30
100.0	9.811	33.979	26.189	183.95	0.237	0.30
120.0	9.361	34.057	26.324	171.38	0.273	0.28
140.0	9.149	34.091	26.385	165.99	0.307	0.28
160.0	8.871	34.130	26.461	159.15	0.339	0.26
180.0	8.709	34.170	26.517	154.11	0.370	0.27
200.0	8.684	34.179	26.528	153.47	0.401	0.27
250.0	8.368	34.230	26.618	145.79	0.476	0.26
300.0	8.051	34.236	26.671	141.47	0.548	0.22
350.0	7.867	34.251	26.711	138.54	0.617	0.20
400.0	7.339	34.267	26.800	130.54	0.685	0.14
450.0	6.968	34.284	26.865	124.86	0.748	0.10
473.5	6.505	34.303	26.942	117.43	0.777	0.05

STATION: 6                      DATE: 5/ 6/90                      0336 GMT

LAT: 33° 32.1 N.                      LON: 119° 56.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.264	33.571	24.589	333.87	0.000	1.28
5.0	16.266	33.574	24.592	333.81	0.017	1.29
10.0	16.270	33.577	24.593	333.87	0.033	1.29
15.0	16.221	33.569	24.598	333.53	0.050	1.27
20.0	14.559	33.561	24.958	299.33	0.066	0.89
25.0	13.581	33.566	25.167	279.62	0.080	0.69
30.0	13.124	33.580	25.269	269.96	0.094	0.60
40.0	12.082	33.586	25.477	250.40	0.120	0.40
50.0	11.195	33.630	25.675	231.75	0.144	0.27
60.0	10.754	33.702	25.810	219.12	0.167	0.24
70.0	10.543	33.748	25.883	212.40	0.188	0.24
80.0	10.136	33.899	26.071	194.73	0.209	0.29
100.0	9.753	33.995	26.211	181.84	0.246	0.30
120.0	9.489	34.052	26.299	173.82	0.282	0.30
140.0	9.250	34.074	26.356	168.80	0.317	0.28
160.0	9.017	34.112	26.423	162.74	0.350	0.27
180.0	8.885	34.136	26.463	159.32	0.382	0.27
200.0	8.679	34.164	26.518	154.46	0.413	0.26
250.0	8.289	34.225	26.626	144.96	0.488	0.25
300.0	7.893	34.248	26.704	138.31	0.559	0.20
350.0	7.682	34.251	26.738	135.85	0.627	0.17
400.0	7.326	34.263	26.799	130.63	0.694	0.13
450.0	6.992	34.279	26.858	125.52	0.758	0.10
500.0	6.658	34.294	26.916	120.53	0.819	0.06
543.1	6.366	34.306	26.964	116.28	0.871	0.03

STATION: 10

DATE: 5/ 6/90

1523 GMT

LAT: 33° 38.3 N.

LON: 119° 53.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.281	33.575	24.813	312.59	0.000	1.06
5.0	15.279	33.578	24.816	312.43	0.016	1.06
10.0	15.280	33.578	24.816	312.60	0.031	1.06
15.0	14.520	33.542	24.952	299.77	0.047	0.87
20.0	12.815	33.522	25.285	268.15	0.061	0.49
25.0	12.426	33.521	25.361	261.09	0.074	0.42
30.0	12.021	33.551	25.461	251.63	0.087	0.36
40.0	11.881	33.564	25.498	248.42	0.112	0.34
50.0	11.595	33.586	25.568	241.96	0.136	0.31
60.0	10.523	33.717	25.862	214.13	0.159	0.21
70.0	10.206	33.825	26.001	201.13	0.180	0.24
80.0	9.986	33.916	26.110	191.03	0.200	0.28
100.0	9.810	33.962	26.176	185.17	0.237	0.28
120.0	9.649	34.002	26.234	180.03	0.274	0.29
140.0	9.296	34.087	26.358	168.55	0.308	0.30
160.0	9.208	34.122	26.401	164.96	0.342	0.31
169.9	9.173	34.131	26.413	163.94	0.358	0.31

STATION: 11

DATE: 5/ 6/90

1618 GMT

LAT: 33° 35.9 N.

LON: 119° 52.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.800	33.567	24.691	324.15	0.000	1.17
5.0	15.312	33.563	24.797	314.27	0.016	1.06
10.0	12.318	33.522	25.381	258.73	0.030	0.40
15.0	11.982	33.536	25.456	251.73	0.043	0.34
20.0	11.775	33.546	25.503	247.42	0.055	0.31
25.0	11.543	33.558	25.555	242.54	0.068	0.27
30.0	11.212	33.590	25.641	234.53	0.080	0.24
40.0	10.827	33.665	25.768	222.63	0.102	0.23
50.0	10.717	33.685	25.803	219.52	0.124	0.22
60.0	10.627	33.697	25.828	217.39	0.146	0.22
70.0	10.533	33.721	25.864	214.20	0.168	0.22
80.0	10.339	33.762	25.930	208.16	0.189	0.22
100.0	9.807	33.930	26.151	187.47	0.229	0.26
120.0	9.276	34.065	26.344	169.47	0.265	0.28
140.0	8.896	34.135	26.460	158.79	0.297	0.27
160.0	8.887	34.143	26.468	158.48	0.329	0.27
180.0	8.762	34.165	26.505	155.27	0.360	0.27
200.0	8.689	34.187	26.534	152.90	0.391	0.28
250.0	8.265	34.239	26.641	143.58	0.466	0.25
300.0	8.071	34.247	26.677	140.97	0.537	0.23
329.0	7.830	34.256	26.720	137.28	0.577	0.20

STATION: 12

DATE: 5/ 6/90

1723 GMT

LAT: 33° 34.1 N.

LON: 119° 50.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.153	33.518	25.410	255.78	0.000	0.36
5.0	12.153	33.518	25.410	255.90	0.013	0.36
10.0	12.153	33.518	25.410	256.02	0.026	0.36
15.0	11.955	33.542	25.466	250.77	0.038	0.34
20.0	11.868	33.557	25.494	248.28	0.051	0.34
25.0	11.825	33.559	25.504	247.45	0.063	0.33
30.0	11.479	33.566	25.573	240.95	0.075	0.27
40.0	11.352	33.616	25.636	235.24	0.099	0.28
50.0	11.007	33.648	25.723	227.18	0.122	0.25
60.0	10.791	33.676	25.783	221.69	0.144	0.23
70.0	10.416	33.740	25.899	210.89	0.166	0.21
80.0	10.082	33.795	25.999	201.55	0.187	0.20
100.0	9.716	33.886	26.132	189.28	0.226	0.21
120.0	9.581	33.995	26.240	179.44	0.262	0.27
140.0	9.178	34.104	26.391	165.42	0.297	0.29
160.0	8.967	34.134	26.449	160.32	0.330	0.28
180.0	8.673	34.182	26.532	152.68	0.361	0.27
200.0	8.444	34.199	26.581	148.34	0.391	0.25
250.0	8.064	34.243	26.674	140.33	0.463	0.23
300.0	7.706	34.264	26.743	134.45	0.531	0.19
351.5	7.029	34.298	26.867	123.18	0.598	0.12

STATION: 13

DATE: 5/ 6/90

1800 GMT

LAT: 33° 32.7 N.

LON: 119° 50.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.381	33.584	24.573	335.47	0.000	1.32
5.0	16.383	33.588	24.576	335.35	0.017	1.32
10.0	16.378	33.589	24.577	335.36	0.034	1.32
15.0	15.957	33.547	24.641	329.45	0.050	1.19
20.0	14.186	33.476	24.970	298.20	0.066	0.74
25.0	11.913	33.567	25.493	248.47	0.079	0.35
30.0	11.705	33.586	25.547	243.48	0.092	0.33
40.0	11.346	33.613	25.635	235.35	0.116	0.28
50.0	10.750	33.667	25.784	221.40	0.138	0.22
60.0	10.420	33.719	25.882	212.26	0.160	0.20
70.0	10.250	33.737	25.925	208.38	0.181	0.18
80.0	9.854	33.800	26.041	197.49	0.202	0.16
100.0	9.563	33.986	26.235	179.46	0.239	0.26
120.0	9.371	34.051	26.318	171.99	0.274	0.28
140.0	9.156	34.108	26.398	164.81	0.307	0.29
160.0	8.868	34.155	26.481	157.26	0.340	0.28
180.0	8.707	34.174	26.520	153.82	0.371	0.27
200.0	8.494	34.214	26.586	147.96	0.401	0.27
250.0	8.181	34.242	26.655	142.16	0.473	0.24
293.8	7.838	34.263	26.723	136.30	0.533	0.21

## Farallones

5- 10 August

This survey was performed aboard the R/V Point Sur during the period 5 - 10 August 1990. The survey consisted of 60 CTD casts off the central California coast (Figure 2). The CTD temperature calibration coefficient is 0.99983 (slope) with an intercept of 0.00197; the pressure calibration coefficient is 0.99946 with intercepts determined by individual casts as described earlier (p4). Table 2 contains a comparison of final CTD salinities with bottle salinities sampled at the same stations and depths.

The scientific party consisted of Curt Collins (chief scientist), Leslie Rosenfeld, Thomas Rago, and Jim Cherry of the Naval Postgraduate School; and Frank Schwing, and Dave Husby of PFEG/National Marine Fisheries Service; and Linda Coffman of Humboldt State University.

These data have been analysed by Lt. Erhan Gezgin, Turkish Navy, as part of his thesis work at the Naval Postgraduate School (Gezgin, 1991).

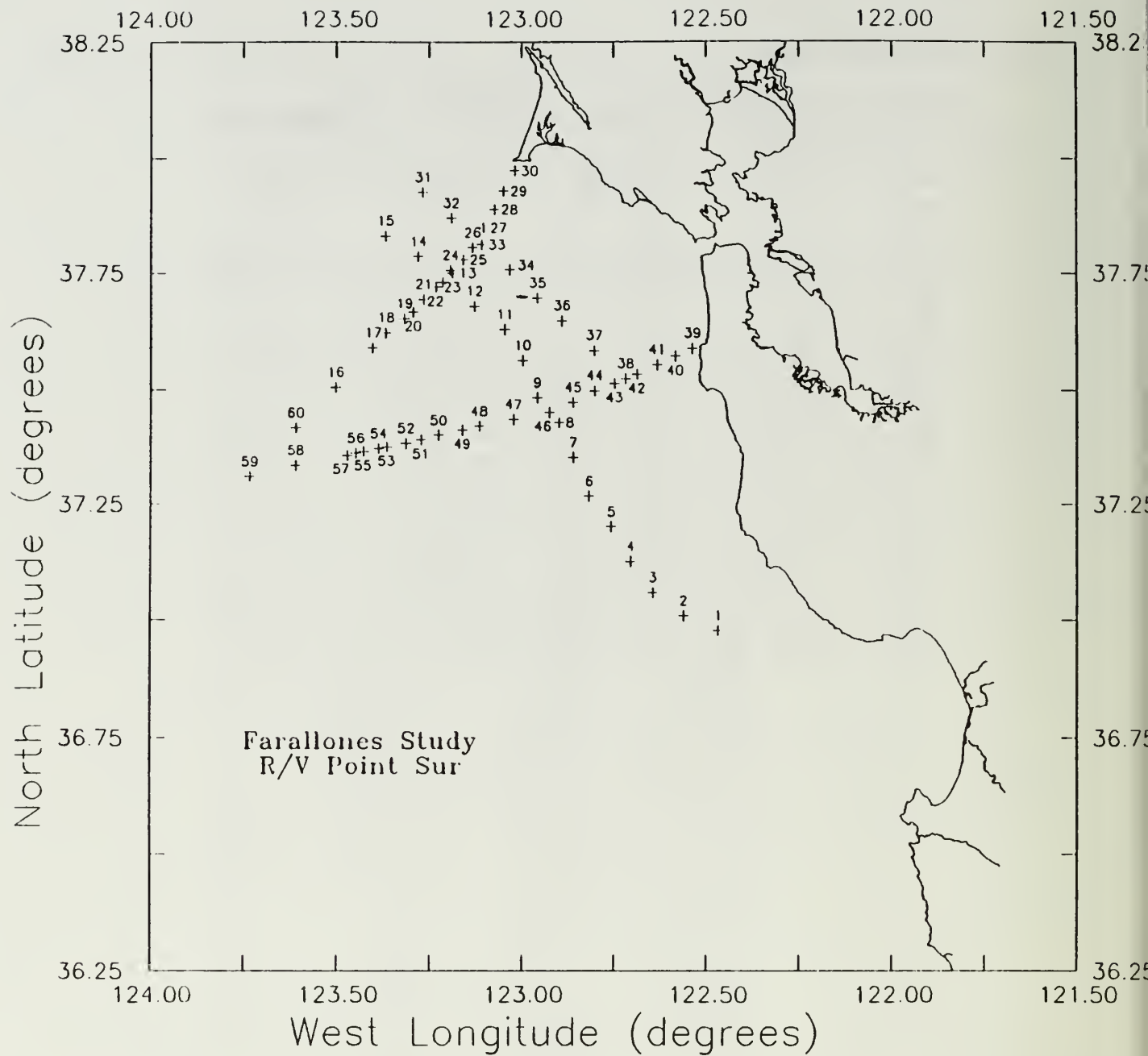
**Table 2. Comparison of CTD and Bottle Salinity Measurements  
Farallones -- Early August**

The original data were acquired during the period  
5 - 10 August 1990 aboard the R/V Point Sur. Salinity  
values from the corrected CTD file are compared with  
the bottle salinities from the same depth.

STATION	PRESSURE (dbar)	SALINITY (psu)		
		CTD	BOTTLE	DIFFERENCE
1	185.9	34.047	34.056	-0.009
2	183.3	34.030	34.038	-0.008
3	249.2	34.097	34.109	-0.012
4	1.8	33.320	33.334	-0.014
5	207.3	34.001	34.022	-0.021
6	174.3	34.058	34.073	-0.015
7	171.7	34.065	34.072	-0.007
8	170.9	34.067	34.075	-0.008
9	177.6	34.043	34.048	-0.005
10	180.9	33.960	33.969	-0.009
11	157.4	33.935	33.945	-0.010
12	189.9	34.069	34.074	-0.005
13	286.3	34.088	34.074	0.014
15	158.3	34.029	34.035	-0.006
16	2300.2	34.628	34.635	-0.007
21	1507.2	34.555	34.558	-0.003
20	1933.4	34.602	34.603	-0.001
22	1217.0	34.491	34.494	-0.003
19	1994.3	34.604	34.603	0.001
23	857.4	34.414	34.418	-0.004
24	114.0	33.815	33.830	-0.015
25	49.4	33.590	33.601	-0.011
27	75.3	33.786	33.790	-0.004
28	75.8	33.774	33.778	-0.004
29	60.9	33.729	33.748	-0.019
30	40.0	33.707	33.715	-0.008
31	79.5	33.798	33.802	-0.004
31	79.5	33.798	33.803	-0.005
32	72.7	33.730	33.732	-0.002
33	58.9	33.674	33.676	-0.002
34	50.9	33.644	33.641	0.003
35	42.1	33.685	33.707	-0.022
36	63.2	33.747	33.750	-0.003
37	60.3	33.741	33.745	-0.004
38	60.5	33.734	33.736	-0.002
39	19.4	33.568	33.595	-0.027
40	29.2	33.649	33.662	-0.013
41	42.7	33.712	33.719	-0.007
42	50.0	33.726	33.729	-0.003
43	65.1	33.741	33.746	-0.005

Table 2. (continued)

STATION	PRESSURE (dbar)	SALINITY (psu)		
		CTD	BOTTLE	DIFFERENCE
44	74.6	33.640	33.641	-0.001
45	91.1	33.765	33.777	-0.012
46	173.0	34.028	34.030	-0.002
47	513.8	34.176	34.179	-0.003
48	746.2	34.340	34.348	-0.008
49	901.8	34.415	34.415	0.000
50	1227.1	34.498	34.501	-0.003
51	1505.0	34.561	34.562	-0.001
53	1652.6	34.565	34.570	-0.005
54	1052.1	34.446	34.450	-0.004
55	942.3	34.417	34.426	-0.009
56	1519.6	34.559	34.571	-0.012
58	999.5	34.441	34.461	-0.020
58	2999.9	34.666	34.673	-0.007
58	3350.6	34.672	34.680	-0.008
59	996.1	34.453	34.445	0.008
59	2995.1	34.668	34.676	-0.008
60	995.4	34.429	34.457	-0.028
60	2995.2	34.666	34.682	-0.016
60	3274.0	34.670	34.687	-0.017



**Figure 2. Hydrographic Stations: Farallones -- Early August**  
Positions shown were occupied by R/V Point Sur during  
the period 5 - 10 August 1990.

# DATA PRESENTATION

STATION: 1                      DATE: 8/ 5/90                      2048 GMT

LAT: 36° 58.6 N.                      LON: 122° 28.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.583	33.376	24.810	312.81	0.000	0.75
5.0	14.568	33.391	24.826	311.52	0.016	0.76
10.0	14.053	33.359	24.909	303.70	0.031	0.62
15.0	11.922	33.079	25.113	284.43	0.046	-.03
20.0	11.460	33.077	25.197	276.54	0.060	-.12
25.0	11.671	33.256	25.298	267.07	0.073	0.06
30.0	11.605	33.295	25.340	263.18	0.087	0.08
40.0	11.544	33.331	25.379	259.67	0.113	0.09
50.0	11.603	33.445	25.457	252.50	0.138	0.20
60.0	11.279	33.536	25.587	240.33	0.163	0.21
70.0	10.456	33.498	25.703	229.42	0.186	0.03
80.0	10.269	33.575	25.795	220.89	0.209	0.06
100.0	9.856	33.673	25.942	207.30	0.252	0.06
120.0	9.499	33.778	26.083	194.28	0.292	0.09
140.0	9.478	33.893	26.178	185.73	0.330	0.17
160.0	9.252	33.962	26.268	177.52	0.366	0.19
180.0	9.069	34.040	26.359	169.26	0.401	0.22
187.1	9.050	34.043	26.364	168.87	0.413	0.22

STATION: 2

DATE: 8/ 5/90

2206 GMT

LAT: 37° 0.5 N.

LON: 122° 33.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.294	33.257	24.780	315.74	0.000	0.59
5.0	14.301	33.259	24.780	315.84	0.016	0.60
10.0	14.292	33.260	24.783	315.74	0.032	0.59
15.0	14.091	33.258	24.824	311.99	0.047	0.55
20.0	12.745	33.403	25.207	275.62	0.062	0.39
25.0	12.510	33.550	25.367	260.49	0.075	0.46
30.0	12.224	33.519	25.398	257.67	0.088	0.37
40.0	10.631	33.295	25.514	246.73	0.114	-0.10
50.0	10.489	33.407	25.626	236.31	0.138	-0.04
60.0	10.296	33.486	25.721	227.53	0.161	-0.01
70.0	10.113	33.584	25.829	217.43	0.183	0.04
80.0	9.880	33.640	25.912	209.73	0.205	0.04
100.0	9.506	33.766	26.073	194.85	0.245	0.08
120.0	9.282	33.852	26.177	185.34	0.283	0.11
140.0	8.982	33.959	26.309	173.18	0.319	0.14
160.0	8.933	33.974	26.328	171.69	0.354	0.15
180.0	9.063	34.027	26.350	170.10	0.388	0.21
183.2	9.060	34.030	26.352	169.92	0.393	0.21

STATION: 3 DATE: 8/ 5/90 2253 GMT

LAT: 37° 3.5 N. LON: 122° 38.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.218	33.308	24.835	310.48	0.000	0.62
5.0	14.222	33.309	24.835	310.63	0.016	0.62
10.0	14.203	33.309	24.839	310.36	0.031	0.61
15.0	13.985	33.319	24.892	305.48	0.047	0.58
20.0	12.535	33.438	25.275	269.10	0.061	0.37
25.0	12.293	33.519	25.384	258.85	0.074	0.39
30.0	11.988	33.526	25.448	252.91	0.087	0.33
40.0	11.658	33.533	25.515	246.73	0.112	0.28
50.0	10.485	33.397	25.619	236.99	0.136	-.05
60.0	10.156	33.505	25.760	223.79	0.159	-.02
70.0	9.982	33.636	25.891	211.52	0.181	0.05
80.0	9.668	33.696	25.991	202.20	0.201	0.05
100.0	9.366	33.785	26.110	191.29	0.241	0.07
120.0	9.168	33.888	26.223	180.97	0.278	0.12
140.0	9.066	33.971	26.305	173.58	0.313	0.17
160.0	9.051	34.047	26.367	168.10	0.347	0.22
180.0	8.988	34.085	26.407	164.67	0.381	0.24
200.0	8.738	34.087	26.448	161.08	0.413	0.21
250.0	8.386	34.097	26.511	155.92	0.492	0.16

STATION: 4 DATE: 8/ 6/90 0000 GMT

LAT: 37° 7.5 N. LON: 122° 42.3 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.242	33.320	24.839	310.07	0.000	0.63
5.0	14.240	33.321	24.840	310.11	0.016	0.63
10.0	14.234	33.326	24.846	309.74	0.031	0.63
15.0	12.855	33.363	25.154	280.49	0.046	0.38
20.0	12.181	33.353	25.276	268.97	0.059	0.23
25.0	11.828	33.352	25.343	262.78	0.073	0.17
30.0	11.883	33.397	25.367	260.58	0.086	0.21
40.0	12.116	33.550	25.443	253.65	0.112	0.38
50.0	11.655	33.560	25.537	244.92	0.137	0.30
60.0	10.491	33.587	25.767	223.20	0.160	0.11
70.0	10.087	33.644	25.880	212.59	0.182	0.08
80.0	9.869	33.718	25.975	203.82	0.202	0.10
100.0	9.571	33.901	26.168	185.85	0.241	0.20
120.0	9.430	33.930	26.214	181.86	0.278	0.19
140.0	9.146	34.007	26.320	172.15	0.313	0.21
160.0	9.099	34.045	26.358	168.98	0.348	0.23
180.0	8.828	34.054	26.408	164.52	0.381	0.19
200.0	8.746	34.070	26.434	162.45	0.414	0.19
242.0	8.533	34.059	26.458	160.79	0.482	0.15

STATION: 5 DATE: 8/ 6/90 0053 GMT

LAT: 37° 12.0 N. LON: 122° 45.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.480	33.375	24.832	310.81	0.000	0.73
5.0	14.481	33.375	24.832	310.95	0.016	0.73
10.0	14.319	33.381	24.871	307.39	0.031	0.70
15.0	11.791	33.308	25.314	265.25	0.045	0.12
20.0	10.710	33.230	25.449	252.48	0.058	-0.14
25.0	11.394	33.464	25.510	246.89	0.071	0.17
30.0	11.775	33.591	25.538	244.32	0.083	0.34
40.0	11.126	33.551	25.626	236.19	0.107	0.19
50.0	10.337	33.649	25.841	215.86	0.130	0.13
60.0	10.145	33.712	25.923	208.32	0.151	0.14
70.0	10.046	33.735	25.958	205.18	0.172	0.14
80.0	10.047	33.766	25.982	203.10	0.192	0.17
100.0	9.933	33.856	26.072	195.00	0.232	0.22
120.0	9.750	33.873	26.117	191.16	0.271	0.20
140.0	9.428	33.901	26.192	184.40	0.308	0.17
160.0	9.377	33.927	26.220	182.06	0.345	0.18
180.0	9.367	33.939	26.232	181.38	0.381	0.19
200.0	9.076	33.984	26.314	173.90	0.416	0.18
207.5	8.992	34.001	26.341	171.46	0.429	0.18

STATION: 6 DATE: 8/ 6/90 0200 GMT

LAT: 37° 16.0 N. LON: 122° 49.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.527	33.388	24.832	310.80	0.000	0.75
5.0	14.526	33.389	24.832	310.86	0.016	0.75
10.0	14.514	33.388	24.835	310.80	0.031	0.74
15.0	14.493	33.388	24.840	310.48	0.047	0.74
20.0	14.380	33.385	24.861	308.57	0.062	0.71
25.0	12.331	33.439	25.315	265.40	0.076	0.33
30.0	11.655	33.396	25.409	256.59	0.089	0.17
40.0	10.913	33.445	25.582	240.38	0.114	0.07
50.0	10.884	33.606	25.712	228.17	0.137	0.19
60.0	10.641	33.610	25.758	224.02	0.160	0.15
70.0	10.326	33.615	25.817	218.63	0.182	0.10
80.0	10.065	33.659	25.896	211.33	0.203	0.09
100.0	9.840	33.817	26.057	196.41	0.243	0.17
120.0	9.426	33.895	26.187	184.43	0.282	0.17
140.0	9.064	34.001	26.328	171.36	0.317	0.19
160.0	8.726	34.050	26.420	162.91	0.350	0.18
173.8	8.540	34.058	26.456	159.77	0.373	0.15

STATION: 7 DATE: 8/ 6/90 0300 GMT

LAT: 37° 21.1 N. LON: 122° 51.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.033	33.207	24.796	314.23	0.000	0.50
5.0	14.040	33.207	24.794	314.49	0.016	0.50
10.0	14.027	33.208	24.798	314.28	0.031	0.50
15.0	14.022	33.216	24.805	313.74	0.047	0.50
20.0	13.937	33.216	24.823	312.21	0.063	0.48
25.0	13.383	33.210	24.931	302.04	0.078	0.36
30.0	12.363	33.208	25.130	283.16	0.093	0.15
40.0	11.539	33.206	25.283	268.81	0.120	-.01
50.0	10.772	33.326	25.514	247.05	0.146	-.05
60.0	10.591	33.373	25.582	240.73	0.170	-.05
70.0	10.706	33.579	25.723	227.61	0.194	0.14
80.0	10.263	33.602	25.818	218.74	0.216	0.08
100.0	9.912	33.777	26.014	200.52	0.257	0.15
120.0	9.692	33.844	26.104	192.39	0.296	0.17
140.0	9.389	33.971	26.253	178.59	0.334	0.22
160.0	8.892	34.052	26.396	165.28	0.368	0.20
170.0	8.813	34.065	26.419	163.30	0.384	0.20

STATION: 8 DATE: 8/ 6/90 0400 GMT

LAT: 37° 25.7 N. LON: 122° 53.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.871	33.323	24.708	322.58	0.000	0.77
5.0	14.870	33.325	24.710	322.51	0.016	0.77
10.0	14.866	33.329	24.714	322.27	0.032	0.78
15.0	14.151	33.324	24.861	308.39	0.048	0.62
20.0	12.919	33.331	25.117	284.15	0.063	0.36
25.0	11.782	33.333	25.336	263.39	0.077	0.14
30.0	11.346	33.364	25.440	253.59	0.090	0.08
40.0	10.711	33.444	25.616	237.09	0.114	0.03
50.0	10.415	33.469	25.687	230.53	0.137	0.00
60.0	10.087	33.501	25.768	223.01	0.160	-.03
70.0	10.043	33.613	25.863	214.17	0.182	0.05
80.0	10.102	33.795	25.996	201.84	0.203	0.20
100.0	9.907	33.850	26.072	195.01	0.242	0.21
120.0	9.553	33.911	26.179	185.23	0.280	0.20
140.0	9.445	33.942	26.221	181.62	0.317	0.21
160.0	8.770	34.053	26.416	163.37	0.351	0.18
170.0	8.694	34.067	26.439	161.35	0.368	0.18

STATION: 9 DATE: 8/ 6/90 0453 GMT

LAT: 37° 28.9 N. LON: 122° 57.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.716	33.350	24.762	317.43	0.000	0.76
5.0	14.691	33.349	24.767	317.09	0.016	0.75
10.0	14.322	33.335	24.834	310.83	0.032	0.66
15.0	12.405	33.300	25.193	276.80	0.046	0.24
20.0	11.448	33.250	25.334	263.51	0.060	0.01
25.0	10.660	33.248	25.472	250.40	0.073	-.13
30.0	10.444	33.351	25.590	239.34	0.085	-.09
40.0	10.447	33.492	25.700	229.12	0.108	0.02
50.0	10.664	33.722	25.841	215.91	0.131	0.24
60.0	10.485	33.819	25.948	205.99	0.152	0.29
70.0	10.396	33.823	25.967	204.38	0.172	0.28
80.0	10.177	33.858	26.032	198.40	0.192	0.26
100.0	9.868	33.910	26.126	189.93	0.231	0.25
120.0	9.164	33.856	26.198	183.28	0.268	0.09
140.0	9.122	33.949	26.278	176.11	0.304	0.16
160.0	8.749	34.012	26.387	166.06	0.339	0.15
177.0	8.612	34.043	26.433	162.02	0.366	0.15

STATION: 10 DATE: 8/ 6/90 0606 GMT

LAT: 37° 33.7 N. LON: 122° 59.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.584	33.366	24.803	313.57	0.000	0.74
5.0	14.582	33.367	24.804	313.61	0.016	0.74
10.0	14.587	33.367	24.803	313.82	0.031	0.74
15.0	14.360	33.331	24.824	311.98	0.047	0.67
20.0	12.271	33.216	25.153	280.71	0.062	0.14
25.0	10.803	33.132	25.357	261.37	0.075	-.20
30.0	10.517	33.150	25.420	255.43	0.088	-.24
40.0	9.887	33.295	25.640	234.69	0.113	-.23
50.0	10.088	33.484	25.755	224.07	0.136	-.05
60.0	9.960	33.623	25.885	211.91	0.157	0.04
70.0	9.515	33.661	25.989	202.21	0.178	0.00
80.0	9.626	33.718	26.015	199.93	0.198	0.06
100.0	9.449	33.815	26.120	190.34	0.237	0.11
120.0	9.302	33.894	26.206	182.57	0.274	0.15
140.0	9.285	33.933	26.240	179.76	0.310	0.17
160.0	9.152	33.952	26.276	176.69	0.346	0.17
179.9	8.928	33.960	26.318	173.01	0.381	0.14

STATION: 11                      DATE: 8/ 6/90                      0700 GMT

LAT: 37° 37.7 N.                      LON: 123° 2.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.5	14.451	33.323	24.798	314.05	0.002	0.68
5.0	14.466	33.334	24.803	313.69	0.016	0.69
10.0	14.458	33.335	24.806	313.57	0.031	0.69
15.0	14.355	33.320	24.816	312.69	0.047	0.66
20.0	12.827	33.369	25.164	279.65	0.062	0.38
25.0	12.527	33.422	25.264	270.26	0.076	0.36
30.0	11.798	33.371	25.363	260.97	0.089	0.17
40.0	10.622	33.411	25.606	238.02	0.114	-0.01
50.0	10.463	33.497	25.701	229.23	0.137	0.03
60.0	10.316	33.667	25.859	214.44	0.159	0.14
70.0	10.185	33.758	25.952	205.76	0.180	0.19
80.0	9.894	33.815	26.046	197.03	0.201	0.18
100.0	9.646	33.835	26.104	191.96	0.239	0.16
120.0	9.595	33.887	26.153	187.69	0.277	0.19
140.0	9.472	33.923	26.202	183.45	0.314	0.20
159.7	9.392	33.937	26.226	181.54	0.350	0.19

STATION: 12                      DATE: 8/ 6/90                      0823 GMT

LAT: 37° 40.7 N.                      LON: 123° 7.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.252	33.364	24.871	307.04	0.000	0.67
5.0	14.253	33.364	24.871	307.20	0.015	0.67
10.0	14.257	33.364	24.870	307.40	0.031	0.67
15.0	14.226	33.361	24.875	307.09	0.046	0.66
20.0	13.708	33.349	24.973	297.92	0.061	0.54
25.0	12.123	33.401	25.326	264.42	0.075	0.26
30.0	11.764	33.463	25.441	253.53	0.088	0.24
40.0	10.881	33.554	25.672	231.76	0.112	0.15
50.0	10.667	33.579	25.729	226.54	0.135	0.13
60.0	10.203	33.656	25.870	213.36	0.157	0.11
70.0	10.156	33.689	25.904	210.37	0.178	0.13
80.0	9.961	33.760	25.993	202.13	0.199	0.15
100.0	9.483	33.862	26.151	187.39	0.238	0.15
120.0	9.305	33.889	26.202	182.99	0.275	0.14
140.0	8.927	33.877	26.253	178.45	0.311	0.07
160.0	8.977	34.016	26.354	169.25	0.346	0.19
180.0	8.908	34.039	26.384	166.85	0.380	0.20
189.9	8.632	34.069	26.450	160.62	0.396	0.18

STATION: 13

DATE: 8/ 6/90

1006 GMT

LAT: 37° 45.0 N.

LON: 123° 11.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.500	33.368	24.822	311.72	0.000	0.73
5.0	14.502	33.367	24.821	311.93	0.016	0.73
10.0	14.505	33.367	24.821	312.14	0.031	0.73
15.0	14.485	33.367	24.825	311.86	0.047	0.72
20.0	14.389	33.363	24.842	310.35	0.062	0.70
25.0	13.769	33.362	24.970	298.29	0.078	0.56
30.0	12.869	33.371	25.158	280.50	0.092	0.38
40.0	10.790	33.518	25.660	232.88	0.118	0.10
50.0	10.392	33.627	25.815	218.42	0.140	0.12
60.0	10.071	33.719	25.941	206.60	0.161	0.14
70.0	9.946	33.756	25.991	202.02	0.182	0.14
80.0	9.684	33.798	26.068	194.92	0.202	0.13
100.0	9.492	33.858	26.147	187.82	0.240	0.15
120.0	9.345	33.948	26.242	179.22	0.276	0.20
140.0	9.123	33.959	26.286	175.35	0.312	0.17
160.0	9.179	34.010	26.317	172.81	0.347	0.22
180.0	9.089	34.031	26.348	170.27	0.381	0.22
200.0	8.714	34.049	26.422	163.54	0.414	0.17
250.0	7.967	34.074	26.555	151.47	0.492	0.08
287.0	7.679	34.089	26.610	146.81	0.548	0.05

STATION: 14

DATE: 8/ 6/90

1100 GMT

LAT: 37° 47.2 N.

LON: 123° 16.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.271	33.373	24.874	306.76	0.000	0.68
5.0	14.273	33.373	24.874	306.93	0.015	0.68
10.0	14.265	33.372	24.875	306.95	0.031	0.68
15.0	14.249	33.372	24.879	306.74	0.046	0.67
20.0	14.194	33.360	24.881	306.66	0.061	0.65
25.0	13.379	33.377	25.061	289.68	0.076	0.49
30.0	12.035	33.417	25.354	261.82	0.090	0.26
40.0	11.180	33.466	25.550	243.36	0.115	0.13
50.0	10.542	33.524	25.708	228.54	0.139	0.06
60.0	9.903	33.665	25.928	207.85	0.161	0.07
70.0	9.714	33.708	25.993	201.84	0.181	0.07
80.0	9.495	33.761	26.070	194.68	0.201	0.07
100.0	9.094	33.803	26.168	185.72	0.239	0.04
120.0	9.034	33.897	26.251	178.25	0.275	0.10
140.0	9.161	33.974	26.292	174.84	0.310	0.18
160.0	9.082	34.030	26.348	169.84	0.345	0.22
180.0	8.792	34.060	26.418	163.56	0.378	0.19
199.9	8.522	34.066	26.465	159.37	0.410	0.16

STATION: 15

DATE: 8/ 6/90

1206 GMT

LAT: 37° 49.9 N.

LON: 123° 22.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.649	33.356	24.781	315.62	0.000	0.75
5.0	14.651	33.357	24.782	315.70	0.016	0.75
10.0	14.656	33.359	24.782	315.81	0.032	0.75
15.0	14.649	33.359	24.784	315.79	0.047	0.75
20.0	14.604	33.359	24.794	315.01	0.063	0.74
25.0	13.039	33.359	25.115	284.49	0.078	0.41
30.0	11.871	33.357	25.339	263.29	0.092	0.18
40.0	11.059	33.444	25.555	242.93	0.117	0.09
50.0	10.453	33.498	25.703	229.01	0.141	0.03
60.0	10.054	33.564	25.823	217.76	0.163	0.01
70.0	9.904	33.630	25.900	210.68	0.184	0.04
80.0	9.719	33.747	26.022	199.27	0.205	0.10
100.0	9.120	33.818	26.176	185.02	0.243	0.06
120.0	9.004	33.948	26.296	173.95	0.279	0.14
140.0	9.022	33.987	26.324	171.69	0.313	0.17
159.1	9.027	34.029	26.357	169.04	0.346	0.21

STATION: 16                      DATE: 8/ 6/90                      1518 GMT

LAT: 37° 30.3 N.                      LON: 123° 30.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.317	33.374	24.865	307.60	0.000	0.69
5.0	14.317	33.372	24.864	307.85	0.015	0.69
10.0	14.322	33.372	24.863	308.11	0.031	0.69
15.0	14.300	33.373	24.868	307.73	0.046	0.69
20.0	13.556	33.392	25.037	291.84	0.061	0.54
25.0	11.503	33.466	25.491	248.65	0.075	0.19
30.0	11.128	33.475	25.566	241.59	0.087	0.13
40.0	10.009	33.407	25.708	228.32	0.111	-.12
50.0	10.360	33.578	25.782	221.50	0.133	0.08
60.0	10.213	33.632	25.849	215.34	0.155	0.09
70.0	9.854	33.722	25.981	203.03	0.176	0.10
80.0	9.716	33.761	26.034	198.17	0.196	0.11
100.0	9.674	33.883	26.137	188.83	0.235	0.20
120.0	9.243	33.909	26.227	180.53	0.271	0.15
140.0	9.457	33.986	26.253	178.55	0.307	0.24
160.0	9.078	33.985	26.314	173.13	0.342	0.18
180.0	9.035	34.048	26.371	168.12	0.377	0.22
200.0	8.696	34.054	26.429	162.89	0.410	0.17
250.0	8.217	34.066	26.512	155.72	0.489	0.11
300.0	7.617	34.096	26.624	145.63	0.565	0.04
350.0	7.251	34.135	26.707	138.34	0.636	0.02
400.0	6.878	34.156	26.776	132.37	0.703	-.01
450.0	6.453	34.176	26.848	125.87	0.768	-.06
500.0	5.813	34.145	26.906	120.43	0.829	-.16
550.0	5.557	34.172	26.959	115.77	0.888	-.17
600.0	5.661	34.252	27.010	111.74	0.945	-.10
650.0	5.388	34.270	27.058	107.51	0.999	-.12
700.0	5.057	34.303	27.123	101.46	1.052	-.13
750.0	4.792	34.315	27.162	97.83	1.102	-.15
800.0	4.535	34.351	27.220	92.52	1.149	-.15
1000.0	3.954	34.424	27.340	81.94	1.324	-.15
1200.0	3.403	34.478	27.439	72.95	1.478	-.17
1400.0	2.898	34.522	27.522	65.09	1.617	-.18
1600.0	2.553	34.555	27.579	59.73	1.742	-.18
1800.0	2.269	34.576	27.620	55.80	1.857	-.19
2000.0	2.078	34.601	27.657	52.57	1.966	-.19
2200.0	1.912	34.619	27.685	50.00	2.068	-.19
2299.8	1.845	34.628	27.698	48.87	2.117	-.18

STATION: 17

DATE: 8/ 6/90

1736 GMT

LAT: 37° 35.4 N.

LON: 123° 24.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.773	33.343	24.744	319.10	0.000	0.77
5.0	14.770	33.342	24.745	319.21	0.016	0.76
10.0	14.769	33.344	24.746	319.24	0.032	0.77
15.0	14.571	33.345	24.790	315.25	0.048	0.72
20.0	11.432	33.278	25.358	261.21	0.062	0.03
25.0	10.186	33.214	25.527	245.20	0.075	-.25
30.0	9.903	33.258	25.609	237.48	0.087	-.26
40.0	9.986	33.374	25.686	230.38	0.110	-.15
50.0	9.636	33.418	25.778	221.78	0.133	-.18
60.0	9.231	33.482	25.894	210.94	0.155	-.19
70.0	9.135	33.589	25.993	201.73	0.175	-.12
80.0	9.299	33.710	26.062	195.42	0.195	0.00
100.0	9.183	33.872	26.208	181.96	0.233	0.11
120.0	9.199	33.993	26.300	173.63	0.268	0.21
140.0	9.108	34.046	26.357	168.65	0.302	0.23
160.0	8.772	34.069	26.428	162.19	0.336	0.20
180.0	8.660	34.093	26.465	159.08	0.368	0.20
200.0	8.488	34.109	26.504	155.67	0.399	0.18
250.0	8.047	34.118	26.578	149.36	0.475	0.12
300.0	7.319	34.090	26.662	141.83	0.548	0.00
350.0	7.042	34.127	26.730	136.05	0.618	-.01
400.0	6.659	34.169	26.815	128.43	0.684	-.03
450.0	6.257	34.181	26.878	122.86	0.746	-.08
500.0	6.067	34.222	26.935	117.97	0.807	-.07
550.0	5.705	34.244	26.998	112.26	0.864	-.10
600.0	5.157	34.233	27.055	106.80	0.919	-.17
650.0	5.053	34.271	27.097	103.25	0.972	-.15
700.0	4.951	34.313	27.143	99.42	1.022	-.13
750.0	4.672	34.341	27.197	94.42	1.070	-.14
800.0	4.501	34.361	27.231	91.37	1.117	-.14
1000.0	3.889	34.437	27.357	80.19	1.288	-.15
1200.0	3.357	34.492	27.454	71.38	1.440	-.16
1400.0	2.900	34.527	27.525	64.75	1.575	-.17
1600.0	2.542	34.561	27.585	59.16	1.700	-.18
1800.0	2.267	34.588	27.630	54.90	1.813	-.18
2000.0	2.105	34.604	27.657	52.67	1.920	-.18
2151.0	1.935	34.624	27.687	49.73	1.997	-.18

STATION: 18

DATE: 8/ 6/90

2036 GMT

LAT: 37° 37.3 N.

LON: 123° 22.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.864	33.340	24.723	321.19	0.000	0.78
5.0	14.858	33.341	24.724	321.16	0.016	0.78
10.0	14.812	33.341	24.735	320.32	0.032	0.77
15.0	14.109	33.331	24.876	307.05	0.048	0.61
20.0	11.552	33.272	25.330	263.89	0.062	0.05
25.0	10.456	33.269	25.524	245.48	0.075	-.15
30.0	10.194	33.281	25.578	240.42	0.087	-.19
40.0	9.817	33.340	25.687	230.24	0.111	-.21
50.0	9.617	33.399	25.767	222.85	0.133	-.19
60.0	9.732	33.562	25.875	212.80	0.155	-.05
70.0	9.437	33.606	25.958	205.06	0.176	-.06
80.0	9.518	33.717	26.032	198.30	0.196	0.04
100.0	9.550	33.860	26.139	188.61	0.235	0.16
120.0	9.292	33.938	26.242	179.15	0.272	0.18
140.0	9.016	34.001	26.336	170.60	0.306	0.18
160.0	8.947	34.045	26.382	166.62	0.340	0.21
180.0	8.757	34.060	26.424	163.00	0.373	0.19
200.0	8.505	34.078	26.477	158.23	0.405	0.16
250.0	7.876	34.081	26.575	149.59	0.482	0.07
300.0	7.357	34.103	26.667	141.41	0.554	0.01
350.0	6.920	34.139	26.756	133.48	0.623	-.02
400.0	6.581	34.174	26.829	127.02	0.688	-.04
450.0	6.352	34.202	26.883	122.54	0.750	-.05
500.0	6.079	34.231	26.941	117.47	0.810	-.06
550.0	5.466	34.188	26.982	113.44	0.868	-.17
600.0	5.395	34.255	27.044	108.17	0.923	-.13
650.0	5.090	34.273	27.095	103.56	0.976	-.15
700.0	4.927	34.310	27.143	99.35	1.027	-.14
750.0	4.712	34.337	27.189	95.21	1.075	-.14
800.0	4.489	34.353	27.226	91.81	1.122	-.15
1000.0	3.876	34.433	27.356	80.33	1.294	-.15
1200.0	3.421	34.489	27.446	72.35	1.446	-.16
1400.0	2.981	34.529	27.520	65.55	1.584	-.17
1600.0	2.582	34.562	27.582	59.57	1.708	-.17
1800.0	2.248	34.590	27.633	54.55	1.822	-.18
2000.0	2.025	34.613	27.670	51.03	1.927	-.18
2200.0	1.874	34.631	27.698	48.64	2.027	-.18
2244.3	1.866	34.632	27.699	48.64	2.049	-.18

STATION: 19

DATE: 8/ 7/90

0918 GMT

LAT: 37° 39.1 N.

LON: 123° 19.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.940	33.382	24.738	319.67	0.000	0.83
5.0	14.943	33.382	24.738	319.85	0.016	0.83
10.0	14.941	33.382	24.739	319.96	0.032	0.83
15.0	13.982	33.394	24.948	300.12	0.048	0.64
20.0	12.381	33.444	25.309	265.89	0.062	0.35
25.0	11.360	33.467	25.518	246.10	0.074	0.17
30.0	10.796	33.418	25.581	240.20	0.086	0.03
40.0	10.226	33.432	25.691	229.96	0.110	-.06
50.0	9.825	33.509	25.819	217.96	0.132	-.07
60.0	9.790	33.569	25.871	213.20	0.154	-.03
70.0	9.671	33.634	25.942	206.67	0.175	0.00
80.0	9.543	33.683	26.001	201.23	0.195	0.02
100.0	9.376	33.859	26.166	185.94	0.234	0.13
120.0	9.132	33.931	26.262	177.22	0.270	0.15
140.0	8.847	33.983	26.349	169.34	0.305	0.14
160.0	8.638	34.008	26.401	164.66	0.338	0.13
180.0	8.677	34.076	26.449	160.60	0.371	0.19
200.0	8.570	34.108	26.491	156.98	0.403	0.20
250.0	7.943	34.107	26.585	148.64	0.479	0.10
300.0	7.365	34.105	26.667	141.36	0.552	0.01
350.0	6.972	34.127	26.740	135.07	0.621	-.02
400.0	6.721	34.147	26.790	130.91	0.687	-.04
450.0	6.225	34.130	26.842	126.22	0.752	-.12
500.0	5.757	34.153	26.919	119.09	0.813	-.16
550.0	5.630	34.221	26.989	113.04	0.871	-.12
600.0	5.435	34.248	27.034	109.17	0.927	-.13
650.0	5.210	34.268	27.077	105.44	0.980	-.14
700.0	4.978	34.297	27.127	100.93	1.032	-.14
750.0	4.736	34.331	27.181	95.97	1.081	-.14
800.0	4.455	34.353	27.230	91.40	1.128	-.16
1000.0	3.960	34.427	27.342	81.77	1.300	-.15
1200.0	3.358	34.496	27.458	71.09	1.452	-.16
1400.0	2.884	34.538	27.536	63.75	1.588	-.17
1600.0	2.567	34.565	27.586	59.17	1.711	-.17
1800.0	2.317	34.586	27.625	55.66	1.825	-.18
1993.0	2.140	34.604	27.654	53.07	1.930	-.18

STATION: 20

DATE: 8/ 7/90

0648 GMT

LAT: 37° 40.0 N.

LON: 123° 17.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.812	33.373	24.759	317.70	0.000	0.80
5.0	14.812	33.374	24.760	317.74	0.016	0.80
10.0	14.813	33.374	24.760	317.92	0.032	0.80
15.0	14.185	33.388	24.903	304.41	0.047	0.67
20.0	12.283	33.426	25.314	265.43	0.062	0.31
25.0	11.333	33.461	25.518	246.09	0.074	0.16
30.0	11.136	33.494	25.580	240.34	0.087	0.15
40.0	10.601	33.570	25.734	225.88	0.110	0.11
50.0	9.791	33.596	25.892	211.04	0.132	-.01
60.0	9.566	33.663	25.982	202.68	0.152	0.01
70.0	9.499	33.807	26.105	191.14	0.172	0.11
80.0	9.365	33.845	26.157	186.41	0.191	0.12
100.0	9.403	33.944	26.228	180.09	0.227	0.20
120.0	9.197	34.012	26.315	172.21	0.263	0.22
140.0	8.874	34.047	26.395	165.00	0.296	0.20
160.0	8.802	34.071	26.425	162.53	0.329	0.20
180.0	8.712	34.092	26.456	159.94	0.361	0.21
200.0	8.471	34.110	26.507	155.37	0.393	0.18
250.0	7.925	34.106	26.587	148.47	0.469	0.10
300.0	7.369	34.097	26.660	142.04	0.542	0.01
350.0	6.985	34.135	26.744	134.64	0.610	-.02
400.0	6.365	34.117	26.813	128.39	0.676	-.11
450.0	5.947	34.146	26.890	121.42	0.738	-.14
500.0	5.681	34.159	26.933	117.71	0.798	-.17
550.0	5.650	34.225	26.989	113.03	0.856	-.12
600.0	5.425	34.247	27.034	109.11	0.911	-.13
650.0	5.176	34.276	27.087	104.40	0.965	-.14
700.0	5.007	34.292	27.120	101.66	1.016	-.14
750.0	4.819	34.328	27.170	97.18	1.066	-.14
800.0	4.554	34.359	27.225	92.12	1.114	-.14
1000.0	3.838	34.437	27.362	79.59	1.285	-.15
1200.0	3.318	34.498	27.463	70.48	1.435	-.16
1400.0	2.900	34.536	27.533	64.08	1.570	-.17
1600.0	2.617	34.560	27.578	60.12	1.694	-.17
1800.0	2.301	34.587	27.626	55.40	1.810	-.18
1931.6	2.146	34.602	27.652	53.02	1.882	-.18

STATION: 21

DATE: 8/ 7/90

0530 GMT

LAT: 37° 41.6 N.

LON: 123° 15.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.545	33.301	24.761	317.55	0.000	0.68
5.0	14.543	33.307	24.766	317.22	0.016	0.69
10.0	14.545	33.307	24.766	317.37	0.032	0.69
15.0	14.034	33.319	24.882	306.45	0.047	0.59
20.0	12.083	33.377	25.314	265.40	0.062	0.23
25.0	11.134	33.431	25.531	244.84	0.074	0.10
30.0	10.653	33.477	25.652	233.44	0.086	0.05
40.0	10.179	33.591	25.823	217.41	0.109	0.05
50.0	9.903	33.692	25.948	205.67	0.130	0.09
60.0	9.758	33.746	26.015	199.56	0.150	0.10
70.0	9.610	33.809	26.088	192.76	0.170	0.13
80.0	9.510	33.852	26.139	188.17	0.189	0.15
100.0	9.408	33.921	26.210	181.84	0.226	0.18
120.0	9.336	33.992	26.277	175.83	0.262	0.23
140.0	9.087	34.020	26.340	170.25	0.296	0.21
160.0	8.919	34.053	26.392	165.62	0.330	0.21
180.0	8.765	34.073	26.433	162.12	0.362	0.20
200.0	8.709	34.094	26.458	160.08	0.395	0.21
250.0	7.985	34.103	26.576	149.53	0.472	0.10
300.0	7.455	34.108	26.657	142.40	0.545	0.03
350.0	6.823	34.080	26.723	136.50	0.616	-.08
400.0	6.263	34.088	26.803	129.19	0.682	-.15
450.0	5.985	34.112	26.858	124.44	0.745	-.17
500.0	5.603	34.147	26.933	117.64	0.806	-.19
550.0	5.546	34.194	26.978	113.97	0.864	-.16
600.0	5.493	34.242	27.022	110.35	0.920	-.12
650.0	5.229	34.265	27.072	105.90	0.974	-.14
700.0	5.076	34.299	27.117	101.99	1.026	-.13
750.0	4.764	34.330	27.177	96.38	1.075	-.14
800.0	4.511	34.365	27.233	91.20	1.122	-.14
1000.0	3.797	34.444	27.372	78.59	1.292	-.15
1200.0	3.298	34.500	27.466	70.10	1.440	-.16
1400.0	2.851	34.539	27.539	63.30	1.573	-.17
1509.3	2.656	34.555	27.570	60.46	1.640	-.17

STATION: 22                      DATE: 8/ 7/90                      1248 GMT

LAT: 37° 43.2 N.                      LON: 123° 13.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.365	33.365	24.848	309.23	0.000	0.69
5.0	14.366	33.364	24.848	309.42	0.015	0.69
10.0	14.364	33.364	24.848	309.52	0.031	0.69
15.0	14.349	33.365	24.852	309.30	0.046	0.69
20.0	14.270	33.367	24.870	307.70	0.062	0.67
25.0	13.874	33.374	24.958	299.49	0.077	0.59
30.0	12.174	33.442	25.348	262.44	0.091	0.30
40.0	11.275	33.529	25.582	240.36	0.116	0.20
50.0	10.607	33.594	25.752	224.39	0.139	0.13
60.0	10.089	33.675	25.904	210.10	0.161	0.10
70.0	9.872	33.714	25.971	203.92	0.182	0.10
80.0	9.706	33.760	26.035	198.08	0.202	0.11
100.0	9.529	33.823	26.113	191.03	0.241	0.13
120.0	9.376	33.915	26.211	182.16	0.278	0.17
140.0	9.146	33.974	26.294	174.59	0.314	0.18
160.0	9.035	34.010	26.340	170.60	0.348	0.19
180.0	8.603	33.982	26.386	166.47	0.382	0.10
200.0	8.421	34.008	26.435	162.18	0.415	0.09
250.0	8.306	34.125	26.545	152.65	0.493	0.17
300.0	7.572	34.096	26.631	144.97	0.567	0.04
350.0	6.977	34.081	26.702	138.58	0.638	-.06
400.0	6.500	34.092	26.776	132.02	0.706	-.12
450.0	6.188	34.111	26.831	127.18	0.771	-.14
500.0	5.898	34.138	26.890	122.03	0.833	-.16
550.0	5.615	34.185	26.962	115.50	0.892	-.15
600.0	5.527	34.244	27.020	110.63	0.949	-.12
650.0	5.254	34.267	27.071	106.04	1.003	-.13
700.0	4.988	34.304	27.131	100.53	1.055	-.14
750.0	4.700	34.344	27.196	94.57	1.103	-.14
800.0	4.543	34.362	27.228	91.80	1.150	-.14
1000.0	3.810	34.448	27.374	78.44	1.320	-.15
1200.0	3.452	34.485	27.440	73.02	1.470	-.16
1215.9	3.387	34.491	27.451	71.92	1.482	-.16

STATION: 23

DATE: 8/ 7/90

1718 GMT

LAT: 37° 43.8 N.

LON: 123° 12.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.487	33.302	24.774	316.31	0.000	0.67
5.0	14.441	33.303	24.785	315.43	0.016	0.66
10.0	14.272	33.311	24.826	311.62	0.031	0.63
15.0	14.167	33.317	24.853	309.18	0.047	0.61
20.0	14.124	33.327	24.870	307.70	0.062	0.61
25.0	13.678	33.330	24.964	298.88	0.078	0.52
30.0	11.878	33.381	25.356	261.65	0.092	0.20
40.0	10.752	33.499	25.652	233.70	0.116	0.08
50.0	10.487	33.568	25.753	224.32	0.139	0.09
60.0	10.254	33.645	25.853	215.00	0.161	0.11
70.0	10.116	33.712	25.928	208.02	0.182	0.14
80.0	9.881	33.737	25.988	202.58	0.203	0.12
100.0	9.586	33.809	26.093	192.92	0.243	0.13
120.0	9.408	33.880	26.178	185.26	0.280	0.15
140.0	9.404	33.966	26.246	179.23	0.317	0.22
160.0	8.876	33.965	26.331	171.46	0.352	0.13
180.0	8.845	34.053	26.404	164.87	0.385	0.20
200.0	8.576	34.076	26.464	159.46	0.418	0.17
250.0	8.045	34.119	26.579	149.27	0.495	0.12
300.0	7.319	34.091	26.663	141.79	0.568	0.00
350.0	6.940	34.109	26.730	135.98	0.637	-.04
400.0	6.583	34.134	26.798	130.01	0.703	-.07
450.0	6.061	34.124	26.858	124.54	0.767	-.15
500.0	5.802	34.152	26.913	119.76	0.828	-.16
550.0	5.612	34.198	26.972	114.56	0.886	-.15
600.0	5.367	34.228	27.026	109.80	0.942	-.15
650.0	5.146	34.286	27.099	103.28	0.995	-.13
700.0	4.880	34.322	27.158	97.87	1.046	-.13
750.0	4.726	34.342	27.191	95.02	1.094	-.14
800.0	4.419	34.377	27.253	89.20	1.140	-.14
857.6	4.099	34.414	27.317	83.16	1.190	-.15

STATION: 24                      DATE: 8/ 7/90                      1800 GMT

LAT: 37° 45.3 N.                      LON: 123° 11.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.303	33.356	24.854	308.65	0.000	0.67
5.0	14.176	33.363	24.887	305.70	0.015	0.65
10.0	13.818	33.370	24.966	298.29	0.031	0.58
15.0	12.837	33.389	25.178	278.24	0.045	0.39
20.0	12.520	33.393	25.243	272.16	0.059	0.33
25.0	12.251	33.407	25.305	266.35	0.072	0.29
30.0	11.918	33.424	25.382	259.19	0.085	0.24
40.0	11.111	33.496	25.586	239.96	0.110	0.14
50.0	10.823	33.557	25.685	230.79	0.133	0.14
60.0	10.393	33.664	25.843	215.92	0.156	0.15
70.0	10.168	33.730	25.934	207.54	0.177	0.16
80.0	10.109	33.738	25.950	206.20	0.197	0.16
100.0	9.895	33.807	26.040	198.00	0.237	0.18
113.8	9.823	33.815	26.059	196.53	0.265	0.17

STATION: 25                      DATE: 8/ 7/90                      1841 GMT

LAT: 37° 46.7 N.                      LON: 123° 9.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.411	33.295	24.784	315.29	0.000	0.65
5.0	14.222	33.374	24.885	305.84	0.016	0.67
10.0	13.674	33.381	25.004	294.68	0.031	0.56
15.0	11.611	33.434	25.446	252.68	0.044	0.19
20.0	11.399	33.480	25.521	245.69	0.057	0.19
25.0	11.334	33.489	25.540	244.05	0.069	0.18
30.0	11.091	33.523	25.610	237.42	0.081	0.16
40.0	10.703	33.567	25.713	227.85	0.104	0.13
51.3	10.461	33.613	25.792	220.62	0.130	0.12

STATION: 26                      DATE: 8/ 7/90                      1930 GMT

LAT: 37° 48.3 N.                      LON: 123° 8.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.318	33.378	24.868	307.33	0.000	0.69
5.0	14.143	33.373	24.901	304.34	0.015	0.65
10.0	13.640	33.382	25.011	293.96	0.030	0.55
15.0	12.864	33.401	25.182	277.86	0.045	0.41
20.0	12.136	33.406	25.327	264.20	0.058	0.27
25.0	11.680	33.422	25.424	255.02	0.071	0.19
30.0	11.153	33.456	25.547	243.44	0.084	0.12
40.0	10.579	33.541	25.715	227.69	0.107	0.08
50.0	10.335	33.608	25.809	218.92	0.129	0.09
60.0	10.067	33.704	25.930	207.62	0.150	0.12
66.0	10.062	33.705	25.932	207.58	0.163	0.12

STATION: 27                      DATE: 8/ 7/90                      2011 GMT

LAT: 37° 50.9 N.                      LON: 123° 6.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.371	33.376	24.855	308.54	0.000	0.70
5.0	14.252	33.383	24.886	305.79	0.015	0.68
10.0	14.079	33.399	24.935	301.28	0.031	0.66
15.0	13.823	33.406	24.993	295.83	0.046	0.61
20.0	13.295	33.409	25.103	285.54	0.060	0.50
25.0	12.241	33.414	25.312	265.70	0.074	0.29
30.0	11.233	33.442	25.522	245.84	0.087	0.12
40.0	10.362	33.506	25.725	226.66	0.110	0.02
50.0	10.265	33.631	25.840	216.02	0.132	0.10
60.0	9.820	33.672	25.946	206.07	0.153	0.06
70.0	9.556	33.782	26.076	193.89	0.173	0.10
73.7	9.485	33.786	26.091	192.55	0.180	0.09

STATION: 28                      DATE: 8/ 7/90                      2048 GMT

LAT: 37° 53.3 N.                      LON: 123° 4.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.865	33.408	24.775	316.22	0.000	0.84
5.0	14.587	33.408	24.834	310.70	0.016	0.78
10.0	14.364	33.394	24.871	307.34	0.031	0.72
15.0	13.709	33.413	25.021	293.18	0.046	0.59
20.0	11.873	33.460	25.418	255.50	0.060	0.26
25.0	11.069	33.535	25.623	236.08	0.072	0.17
30.0	10.820	33.612	25.728	226.24	0.084	0.18
40.0	10.417	33.669	25.843	215.54	0.106	0.16
50.0	10.100	33.697	25.919	208.44	0.127	0.12
60.0	9.768	33.747	26.014	199.64	0.147	0.11
70.0	9.609	33.773	26.061	195.40	0.167	0.10
75.6	9.603	33.774	26.063	195.33	0.178	0.10

STATION: 29                      DATE: 8/ 7/90                      2130 GMT

LAT: 37° 55.7 N.                      LON: 123° 2.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.784	33.383	24.773	316.39	0.000	0.80
5.0	14.750	33.383	24.781	315.81	0.016	0.79
10.0	14.182	33.401	24.915	303.18	0.031	0.68
15.0	12.707	33.424	25.230	273.25	0.046	0.40
20.0	11.636	33.467	25.467	250.82	0.059	0.22
25.0	11.437	33.536	25.558	242.32	0.071	0.24
30.0	11.021	33.568	25.658	232.90	0.083	0.19
40.0	10.328	33.631	25.828	216.87	0.105	0.11
50.0	9.946	33.700	25.947	205.75	0.126	0.10
61.1	9.970	33.729	25.966	204.22	0.149	0.13

STATION: 30

DATE: 8/ 7/90

2211 GMT

LAT: 37° 58.4 N.

LON: 123° 1.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.363	33.432	24.900	304.26	0.000	0.75
5.0	14.198	33.438	24.939	300.68	0.015	0.72
10.0	13.627	33.501	25.107	284.91	0.030	0.64
15.0	12.857	33.537	25.288	267.75	0.044	0.52
20.0	11.814	33.559	25.506	247.16	0.056	0.33
25.0	10.897	33.598	25.703	228.48	0.068	0.19
30.0	10.748	33.682	25.795	219.87	0.080	0.23
39.6	10.537	33.707	25.852	214.68	0.100	0.21

STATION: 31

DATE: 8/ 8/90

1123 GMT

LAT: 37° 55.6 N.

LON: 123° 16.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	13.734	33.385	24.995	295.27	0.000	0.57
5.0	13.557	33.385	25.031	291.96	0.015	0.54
10.0	13.417	33.384	25.059	289.45	0.029	0.51
15.0	13.112	33.390	25.125	283.29	0.044	0.45
20.0	12.757	33.404	25.206	275.71	0.058	0.39
25.0	11.716	33.456	25.443	253.20	0.071	0.23
30.0	10.787	33.554	25.689	229.95	0.083	0.13
40.0	10.324	33.648	25.842	215.55	0.105	0.12
50.0	10.189	33.709	25.913	209.03	0.126	0.15
60.0	10.071	33.747	25.963	204.52	0.147	0.16
70.0	9.931	33.792	26.022	199.13	0.167	0.17
79.1	9.884	33.798	26.035	198.09	0.185	0.17

STATION: 32                      DATE: 8/ 8/90                      1230 GMT

LAT: 37° 52.2 N.                      LON: 123° 11.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	13.789	33.402	24.997	295.10	0.000	0.60
5.0	13.338	33.398	25.085	286.81	0.015	0.50
10.0	12.623	33.406	25.232	272.95	0.029	0.36
15.0	11.405	33.489	25.527	245.04	0.042	0.19
20.0	11.135	33.528	25.606	237.57	0.054	0.18
25.0	10.851	33.551	25.675	231.15	0.065	0.14
30.0	10.640	33.596	25.747	224.41	0.077	0.14
40.0	10.353	33.662	25.848	214.99	0.099	0.14
50.0	10.228	33.704	25.903	210.03	0.120	0.15
60.0	10.172	33.717	25.923	208.35	0.141	0.15
71.5	10.116	33.730	25.942	206.72	0.165	0.15

STATION: 33                      DATE: 8/ 8/90                      1336 GMT

LAT: 37° 48.7 N.                      LON: 123° 6.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.022	33.367	24.921	302.25	0.000	0.62
5.0	13.916	33.366	24.943	300.33	0.015	0.60
10.0	13.655	33.390	25.015	293.62	0.030	0.56
15.0	12.046	33.388	25.329	263.88	0.044	0.24
20.0	11.030	33.469	25.579	240.15	0.057	0.11
25.0	10.813	33.513	25.652	233.31	0.068	0.10
30.0	10.759	33.541	25.683	230.48	0.080	0.12
40.0	10.580	33.570	25.737	225.55	0.103	0.11
50.0	10.308	33.635	25.835	216.47	0.125	0.11
57.6	10.225	33.674	25.880	212.36	0.141	0.13

STATION: 34                      DATE: 8/ 8/90                      1436 GMT

LAT: 37° 45.4 N.                      LON: 123° 1.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.269	33.366	24.869	307.23	0.000	0.67
5.0	13.867	33.362	24.949	299.74	0.015	0.58
10.0	12.734	33.380	25.191	276.87	0.030	0.37
15.0	11.718	33.423	25.418	255.40	0.043	0.20
20.0	11.289	33.489	25.548	243.14	0.055	0.17
25.0	11.078	33.504	25.598	238.48	0.067	0.15
30.0	11.017	33.510	25.614	237.09	0.079	0.14
40.0	10.628	33.567	25.726	226.59	0.103	0.11
49.9	10.295	33.644	25.844	215.57	0.124	0.12

STATION: 35                      DATE: 8/ 8/90                      1541 GMT

LAT: 37° 41.7 N.                      LON: 122° 57.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	13.745	33.366	24.978	296.88	0.000	0.56
5.0	13.385	33.364	25.049	290.24	0.015	0.49
10.0	12.684	33.387	25.206	275.40	0.029	0.36
15.0	11.829	33.411	25.388	258.22	0.042	0.21
20.0	11.255	33.456	25.528	244.98	0.055	0.14
25.0	11.057	33.480	25.583	239.93	0.067	0.12
30.0	11.003	33.487	25.598	238.59	0.079	0.12
40.0	10.364	33.676	25.857	214.13	0.101	0.15
41.5	10.346	33.685	25.867	213.20	0.104	0.16

STATION: 36                      DATE: 8/ 8/90                      1641 GMT

LAT: 37° 38.8 N.                      LON: 122° 53.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.025	33.388	24.937	300.76	0.000	0.64
5.0	13.720	33.360	24.979	296.94	0.015	0.55
10.0	12.862	33.338	25.134	282.29	0.029	0.36
15.0	11.680	33.252	25.291	267.44	0.043	0.06
20.0	10.430	33.193	25.469	250.63	0.056	-.22
25.0	10.134	33.232	25.550	243.00	0.069	-.24
30.0	10.193	33.352	25.634	235.13	0.080	-.13
40.0	10.697	33.649	25.778	221.65	0.103	0.19
50.0	10.317	33.740	25.916	208.82	0.125	0.20
60.0	10.293	33.747	25.925	208.13	0.146	0.20
62.2	10.290	33.747	25.926	208.11	0.150	0.20

STATION: 37                      DATE: 8/ 8/90                      1753 GMT

LAT: 37° 35.0 N.                      LON: 122° 48.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.839	33.328	24.719	321.56	0.000	0.77
5.0	14.378	33.363	24.844	309.79	0.016	0.69
10.0	13.797	33.346	24.952	299.63	0.031	0.56
15.0	13.032	33.337	25.100	285.69	0.046	0.39
20.0	11.513	33.363	25.409	256.32	0.059	0.11
25.0	11.185	33.467	25.549	243.09	0.072	0.14
30.0	11.147	33.542	25.615	236.98	0.084	0.19
40.0	10.792	33.635	25.751	224.28	0.107	0.20
50.0	10.561	33.693	25.837	216.31	0.129	0.20
59.5	10.417	33.741	25.899	210.59	0.149	0.21

STATION: 38                      DATE: 8/ 8/90                      1900 GMT

LAT: 37° 31.4 N.                      LON: 122° 43.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.407	33.403	24.869	307.28	0.000	0.73
5.0	14.361	33.404	24.879	306.43	0.015	0.72
10.0	14.007	33.408	24.957	299.20	0.030	0.65
15.0	13.869	33.404	24.982	296.93	0.045	0.62
20.0	12.749	33.370	25.181	278.10	0.060	0.36
25.0	11.340	33.387	25.459	251.66	0.073	0.10
30.0	11.259	33.520	25.578	240.53	0.085	0.19
40.0	11.089	33.640	25.702	228.95	0.109	0.26
50.0	10.638	33.673	25.808	219.07	0.131	0.20
60.0	10.539	33.734	25.873	213.14	0.153	0.23

STATION: 39                      DATE: 8/ 8/90                      2048 GMT

LAT: 37° 35.3 N.                      LON: 122° 32.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.292	33.480	24.737	319.78	0.000	0.99
5.0	14.725	33.485	24.865	307.81	0.016	0.87
10.0	14.111	33.510	25.014	293.76	0.031	0.75
15.0	13.155	33.543	25.234	272.88	0.045	0.58
18.2	12.594	33.568	25.364	260.58	0.054	0.49

STATION: 40                      DATE: 8/ 8/90                      2118 GMT

LAT: 37° 34.3 N.                      LON: 122° 35.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.320	33.468	24.722	321.25	0.000	0.99
5.0	14.871	33.459	24.813	312.74	0.016	0.88
10.0	13.904	33.441	25.003	294.74	0.031	0.65
15.0	12.409	33.425	25.289	267.64	0.045	0.34
20.0	12.027	33.492	25.414	255.88	0.058	0.31
25.0	11.866	33.564	25.500	247.83	0.071	0.34
29.1	11.376	33.649	25.657	233.00	0.081	0.32

STATION: 41                      DATE: 8/ 8/90                      2206 GMT

LAT: 37° 33.2 N.                      LON: 122° 38.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.248	33.435	24.712	322.16	0.000	0.94
5.0	14.578	33.438	24.860	308.29	0.016	0.80
10.0	13.855	33.440	25.013	293.85	0.031	0.64
15.0	12.519	33.438	25.278	268.70	0.045	0.37
20.0	11.753	33.493	25.466	250.92	0.058	0.26
25.0	11.213	33.592	25.642	234.33	0.070	0.24
30.0	11.113	33.661	25.714	227.57	0.082	0.28
40.0	10.991	33.712	25.775	221.97	0.104	0.29
42.0	10.992	33.712	25.775	222.02	0.108	0.29

STATION: 42                      DATE: 8/ 8/90                      2248 GMT

LAT: 37° 32.0 N.                      LON: 122° 41.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.673	33.342	24.765	317.14	0.000	0.74
5.0	14.140	33.362	24.893	305.10	0.016	0.64
10.0	12.963	33.341	25.115	284.06	0.031	0.38
15.0	12.431	33.339	25.218	274.38	0.044	0.27
20.0	11.187	33.304	25.423	255.03	0.058	0.01
25.0	11.101	33.492	25.584	239.78	0.070	0.14
30.0	11.205	33.584	25.637	234.88	0.082	0.23
40.0	10.776	33.669	25.780	221.47	0.105	0.22
50.0	10.805	33.726	25.820	217.98	0.127	0.27

STATION: 43                      DATE: 8/ 8/90                      2330 GMT

LAT: 37° 30.8 N.                      LON: 122° 44.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.801	33.350	24.744	319.16	0.000	0.78
5.0	14.155	33.341	24.873	306.96	0.016	0.63
10.0	12.367	33.303	25.202	275.80	0.030	0.23
15.0	11.637	33.290	25.330	263.74	0.044	0.08
20.0	11.454	33.400	25.449	252.56	0.057	0.13
25.0	11.352	33.461	25.515	246.40	0.069	0.16
30.0	11.074	33.508	25.602	238.23	0.081	0.15
40.0	10.795	33.591	25.716	227.61	0.105	0.16
50.0	10.605	33.632	25.781	221.58	0.127	0.16
60.0	10.439	33.709	25.871	213.31	0.149	0.19
63.6	10.524	33.741	25.881	212.45	0.156	0.23

STATION: 44                      DATE: 8/ 9/90                      0006 GMT

LAT: 37° 29.8 N.                      LON: 122° 48.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.415	33.282	24.774	316.33	0.000	0.64
5.0	14.260	33.288	24.811	312.88	0.016	0.61
10.0	13.804	33.303	24.917	302.95	0.031	0.52
15.0	13.413	33.262	24.965	298.49	0.046	0.41
20.0	13.193	33.251	25.001	295.22	0.061	0.36
25.0	12.221	33.299	25.228	273.74	0.075	0.20
30.0	12.000	33.371	25.325	264.60	0.089	0.21
40.0	11.818	33.404	25.385	259.15	0.115	0.20
50.0	11.493	33.433	25.468	251.42	0.141	0.17
60.0	11.125	33.555	25.630	236.30	0.165	0.19
70.0	10.422	33.611	25.797	220.51	0.188	0.11
73.6	10.353	33.640	25.832	217.30	0.195	0.12

STATION: 45                      DATE: 8/ 9/90                      0053 GMT

LAT: 37° 28.3 N.                      LON: 122° 51.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.925	33.263	24.650	328.09	0.000	0.74
5.0	14.257	33.275	24.802	313.77	0.016	0.60
10.0	13.758	33.288	24.915	303.13	0.032	0.50
15.0	13.333	33.239	24.964	298.62	0.047	0.38
20.0	12.699	33.308	25.142	281.74	0.061	0.30
25.0	11.693	33.378	25.388	258.51	0.075	0.16
30.0	11.271	33.449	25.520	245.97	0.087	0.14
40.0	10.912	33.563	25.674	231.61	0.111	0.16
50.0	10.444	33.610	25.792	220.54	0.133	0.12
60.0	10.388	33.725	25.892	211.31	0.155	0.20
70.0	10.247	33.760	25.943	206.61	0.176	0.20
80.0	10.198	33.762	25.954	205.84	0.196	0.19
90.1	10.178	33.765	25.960	205.51	0.217	0.19

STATION: 46                      DATE: 8/ 9/90                      0136 GMT

LAT: 37° 27.0 N.                      LON: 122° 55.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.730	33.302	24.722	321.24	0.000	0.72
5.0	14.750	33.312	24.726	321.01	0.016	0.74
10.0	14.713	33.310	24.732	320.55	0.032	0.73
15.0	13.597	33.262	24.928	302.05	0.048	0.45
20.0	12.215	33.241	25.183	277.82	0.062	0.15
25.0	11.737	33.270	25.295	267.29	0.076	0.08
30.0	11.027	33.326	25.468	250.91	0.089	-0.01
40.0	10.876	33.575	25.689	230.17	0.113	0.16
50.0	10.668	33.635	25.773	222.38	0.135	0.18
60.0	10.279	33.703	25.894	211.13	0.157	0.16
70.0	10.057	33.769	25.983	202.82	0.178	0.17
80.0	9.893	33.795	26.031	198.46	0.198	0.17
100.0	9.768	33.815	26.068	195.38	0.237	0.16
120.0	9.648	33.844	26.111	191.70	0.276	0.16
140.0	9.658	33.897	26.151	188.34	0.314	0.21
160.0	9.063	33.994	26.323	172.21	0.350	0.18
173.0	8.843	34.028	26.385	166.55	0.372	0.18

STATION: 47

DATE: 8/ 9/90

0248 GMT

LAT: 37° 26.1 N.

LON: 123° 1.3 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.386	33.372	24.633	329.67	0.000	0.93
5.0	14.592	33.353	24.790	314.86	0.016	0.73
10.0	13.434	33.318	25.004	294.69	0.032	0.46
15.0	11.449	33.308	25.378	259.20	0.045	0.06
20.0	11.271	33.328	25.426	254.69	0.058	0.04
25.0	10.715	33.308	25.510	246.85	0.070	-.08
30.0	10.146	33.275	25.581	240.13	0.083	-.20
40.0	10.285	33.488	25.724	226.78	0.106	-.01
50.0	10.433	33.790	25.935	207.03	0.128	0.26
60.0	10.167	33.843	26.022	198.94	0.148	0.25
70.0	9.908	33.873	26.089	192.74	0.167	0.23
80.0	9.796	33.895	26.125	189.52	0.186	0.23
100.0	9.770	33.899	26.133	189.19	0.224	0.23
120.0	9.680	33.919	26.164	186.66	0.262	0.23
140.0	9.633	33.922	26.175	186.08	0.299	0.22
160.0	9.269	33.959	26.263	178.01	0.336	0.19
180.0	8.952	34.005	26.350	170.04	0.371	0.18
200.0	8.823	34.012	26.376	167.89	0.404	0.16
250.0	8.448	34.083	26.490	157.90	0.486	0.16
300.0	7.816	34.091	26.592	148.83	0.563	0.07
350.0	7.401	34.109	26.666	142.37	0.635	0.02
400.0	6.569	34.141	26.805	129.29	0.704	-.07
450.0	6.397	34.149	26.835	127.09	0.768	-.08
500.0	5.987	34.173	26.906	120.60	0.830	-.12
513.7	5.964	34.176	26.912	120.23	0.846	-.12

STATION: 48

DATE: 8/ 9/90

0400 GMT

LAT: 37° 25.2 N.

LON: 123° 6.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.757	33.244	24.453	346.90	0.000	0.91
5.0	14.926	33.213	24.611	331.91	0.017	0.70
10.0	13.695	33.139	24.812	312.90	0.033	0.37
15.0	11.706	33.061	25.138	281.97	0.048	-.09
20.0	10.966	33.064	25.275	269.01	0.062	-.23
25.0	10.582	33.081	25.355	261.51	0.075	-.28
30.0	10.571	33.187	25.440	253.56	0.088	-.20
40.0	10.626	33.509	25.682	230.84	0.112	0.07
50.0	10.294	33.669	25.864	213.70	0.134	0.14
60.0	10.206	33.738	25.933	207.36	0.155	0.17
70.0	10.084	33.798	26.001	201.13	0.176	0.20
80.0	9.814	33.858	26.094	192.52	0.196	0.20
100.0	9.811	33.927	26.149	187.73	0.234	0.26
120.0	9.587	33.935	26.192	184.00	0.271	0.22
140.0	9.435	33.968	26.243	179.55	0.307	0.23
160.0	9.343	33.979	26.267	177.68	0.343	0.22
180.0	9.198	34.016	26.320	173.01	0.378	0.22
200.0	9.026	34.048	26.372	168.38	0.412	0.22
250.0	8.377	34.091	26.507	156.23	0.494	0.15
300.0	7.892	34.110	26.595	148.53	0.570	0.09
350.0	7.142	34.107	26.701	138.89	0.641	-.02
400.0	6.716	34.126	26.774	132.42	0.709	-.06
450.0	6.319	34.143	26.840	126.50	0.774	-.10
500.0	5.967	34.155	26.895	121.66	0.836	-.13
550.0	5.696	34.180	26.949	116.91	0.896	-.15
600.0	5.501	34.232	27.013	111.21	0.953	-.13
650.0	5.200	34.281	27.088	104.34	1.007	-.13
700.0	5.034	34.305	27.127	101.01	1.058	-.13
744.4	4.797	34.340	27.182	95.97	1.101	-.13

STATION: 49

DATE: 8/ 9/90

0453 GMT

LAT: 37° 24.7 N.

LON: 123° 9.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.6	15.213	33.237	24.567	335.97	0.002	0.78
5.0	14.888	33.264	24.659	327.41	0.017	0.73
10.0	14.002	33.213	24.807	313.46	0.033	0.50
15.0	11.917	33.037	25.081	287.41	0.048	-.07
20.0	11.178	32.993	25.182	277.89	0.062	-.24
25.0	10.875	33.017	25.254	271.13	0.075	-.28
30.0	10.504	33.174	25.441	253.43	0.089	-.22
40.0	10.618	33.383	25.585	240.04	0.113	-.03
50.0	10.444	33.481	25.692	230.09	0.137	0.01
60.0	10.259	33.590	25.808	219.21	0.159	0.07
70.0	10.282	33.696	25.887	211.95	0.181	0.15
80.0	10.208	33.763	25.953	205.92	0.202	0.20
100.0	9.792	33.898	26.128	189.64	0.241	0.23
120.0	9.576	33.957	26.211	182.18	0.278	0.24
140.0	9.420	33.966	26.244	179.46	0.314	0.22
160.0	9.441	33.999	26.266	177.74	0.350	0.25
180.0	9.226	33.994	26.297	175.13	0.385	0.21
200.0	9.008	34.037	26.367	168.89	0.420	0.21
250.0	8.405	34.076	26.492	157.74	0.502	0.15
300.0	7.925	34.116	26.596	148.52	0.579	0.10
350.0	7.218	34.105	26.688	140.10	0.651	-.01
400.0	6.901	34.123	26.747	135.13	0.720	-.04
450.0	6.383	34.118	26.812	129.20	0.786	-.11
500.0	6.003	34.134	26.874	123.67	0.849	-.15
550.0	5.830	34.186	26.937	118.20	0.910	-.13
600.0	5.494	34.225	27.009	111.61	0.967	-.14
650.0	5.322	34.250	27.049	108.17	1.022	-.14
700.0	5.140	34.300	27.111	102.72	1.075	-.12
750.0	4.884	34.333	27.167	97.62	1.125	-.12
800.0	4.565	34.375	27.236	91.09	1.172	-.13
900.0	4.215	34.415	27.306	84.85	1.261	-.13

STATION: 50

DATE: 8/ 9/90

0606 GMT

LAT: 37° 24.0 N.

LON: 123° 13.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.799	33.161	24.379	353.87	0.000	0.85
5.0	15.690	33.158	24.402	351.92	0.018	0.83
10.0	14.219	33.088	24.665	326.92	0.035	0.44
15.0	12.537	33.008	24.939	300.94	0.051	0.03
20.0	11.600	32.950	25.072	288.37	0.065	-.20
25.0	11.481	32.949	25.094	286.46	0.080	-.22
30.0	11.196	32.943	25.140	282.12	0.094	-.28
40.0	10.645	33.314	25.527	245.57	0.120	-.08
50.0	10.589	33.525	25.701	229.22	0.144	0.07
60.0	10.743	33.647	25.769	222.98	0.167	0.20
70.0	10.594	33.746	25.873	213.36	0.188	0.25
80.0	10.459	33.777	25.920	209.05	0.210	0.25
100.0	9.834	33.859	26.091	193.17	0.250	0.21
120.0	9.702	33.946	26.181	185.02	0.287	0.25
140.0	9.584	33.970	26.220	181.75	0.324	0.25
160.0	9.411	33.983	26.259	178.40	0.360	0.23
180.0	9.194	34.014	26.319	173.10	0.395	0.22
200.0	9.129	34.033	26.344	171.11	0.430	0.23
250.0	8.497	34.085	26.485	158.45	0.512	0.17
300.0	8.007	34.130	26.594	148.71	0.589	0.13
350.0	7.225	34.107	26.689	140.03	0.661	0.00
400.0	6.817	34.119	26.755	134.29	0.730	-.05
450.0	6.364	34.146	26.837	126.87	0.795	-.09
500.0	6.079	34.162	26.886	122.61	0.858	-.12
550.0	5.784	34.195	26.949	116.95	0.917	-.13
600.0	5.477	34.233	27.017	110.82	0.974	-.13
650.0	5.277	34.269	27.070	106.19	1.028	-.13
700.0	5.104	34.303	27.117	102.04	1.080	-.12
750.0	4.806	34.341	27.182	96.06	1.129	-.13
800.0	4.543	34.375	27.238	90.84	1.176	-.13
1000.0	3.808	34.458	27.382	77.68	1.344	-.14
1200.0	3.444	34.493	27.447	72.33	1.495	-.15
1225.9	3.389	34.498	27.456	71.50	1.513	-.15

STATION: 51

DATE: 8/ 9/90

0718 GMT

LAT: 37° 23.4 N.

LON: 123° 16.3 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.357	33.271	24.562	336.47	0.000	0.84
5.0	15.351	33.272	24.565	336.39	0.017	0.84
10.0	15.074	33.194	24.565	336.50	0.034	0.71
15.0	14.376	33.066	24.615	331.82	0.050	0.46
20.0	12.583	32.968	24.901	304.66	0.066	0.01
25.0	12.017	32.952	24.997	295.66	0.081	-.12
30.0	11.415	32.967	25.120	284.07	0.096	-.22
40.0	10.348	33.170	25.465	251.35	0.123	-.25
50.0	10.760	33.563	25.700	229.31	0.147	0.13
60.0	10.709	33.702	25.818	218.35	0.169	0.24
70.0	10.556	33.764	25.893	211.42	0.190	0.26
80.0	10.385	33.821	25.968	204.57	0.211	0.27
100.0	9.903	33.869	26.087	193.55	0.251	0.23
120.0	9.612	33.957	26.205	182.75	0.288	0.25
140.0	9.398	33.959	26.242	179.64	0.324	0.21
160.0	9.317	34.003	26.290	175.48	0.360	0.23
180.0	9.061	34.034	26.356	169.54	0.394	0.22
200.0	8.858	34.049	26.400	165.68	0.428	0.20
250.0	8.105	34.081	26.540	152.97	0.508	0.10
300.0	7.696	34.112	26.626	145.54	0.582	0.07
350.0	7.069	34.104	26.708	138.11	0.653	-.03
400.0	6.616	34.125	26.786	131.12	0.720	-.07
450.0	6.203	34.131	26.845	125.87	0.784	-.12
500.0	5.875	34.148	26.901	120.99	0.846	-.15
550.0	5.602	34.189	26.967	115.07	0.905	-.15
600.0	5.378	34.234	27.030	109.49	0.961	-.14
650.0	5.201	34.260	27.072	105.90	1.015	-.15
700.0	5.001	34.301	27.128	100.91	1.067	-.14
750.0	4.843	34.329	27.168	97.41	1.116	-.13
800.0	4.743	34.349	27.196	95.20	1.164	-.13
1000.0	3.975	34.441	27.352	80.92	1.338	-.14
1200.0	3.333	34.501	27.464	70.43	1.489	-.15
1400.0	2.835	34.545	27.546	62.66	1.622	-.17
1503.7	2.637	34.561	27.576	59.77	1.685	-.17

STATION: 52

DATE: 8/ 9/90

0830 GMT

LAT: 37° 23.0 N.

LON: 123° 18.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.424	33.366	24.620	330.91	0.000	0.93
5.0	15.389	33.363	24.626	330.57	0.017	0.92
10.0	14.846	33.332	24.720	321.68	0.033	0.77
15.0	13.961	33.213	24.815	312.79	0.049	0.49
20.0	12.218	33.023	25.014	293.93	0.064	-.02
25.0	11.672	32.996	25.095	286.33	0.078	-.15
30.0	11.191	33.066	25.237	272.94	0.092	-.18
40.0	10.850	33.228	25.424	255.34	0.119	-.12
50.0	10.612	33.328	25.543	244.19	0.144	-.08
60.0	10.555	33.435	25.637	235.53	0.168	0.00
70.0	10.214	33.609	25.832	217.22	0.190	0.07
80.0	10.114	33.766	25.971	204.22	0.211	0.18
100.0	9.854	33.870	26.096	192.69	0.251	0.22
120.0	9.730	33.911	26.149	188.08	0.289	0.23
140.0	9.462	33.955	26.228	180.97	0.325	0.22
160.0	9.353	34.006	26.286	175.81	0.361	0.24
180.0	8.928	34.002	26.351	169.91	0.396	0.17
200.0	8.848	34.032	26.388	166.79	0.429	0.18
250.0	8.071	34.025	26.502	156.61	0.511	0.05
300.0	7.680	34.069	26.594	148.48	0.587	0.03
350.0	7.000	34.052	26.677	141.03	0.659	-.08
400.0	6.570	34.073	26.751	134.38	0.728	-.12
450.0	6.011	34.087	26.835	126.64	0.793	-.18
500.0	5.733	34.146	26.916	119.33	0.855	-.17
550.0	5.522	34.178	26.968	114.88	0.914	-.17
600.0	5.363	34.207	27.010	111.30	0.970	-.17
650.0	5.215	34.246	27.059	107.10	1.025	-.15
700.0	4.997	34.274	27.106	102.88	1.077	-.16
750.0	4.858	34.322	27.161	98.13	1.127	-.14
800.0	4.648	34.346	27.204	94.26	1.175	-.14
1000.0	3.966	34.425	27.340	82.00	1.351	-.15
1200.0	3.391	34.485	27.446	72.30	1.505	-.16
1400.0	2.874	34.516	27.519	65.26	1.641	-.18
1600.0	2.549	34.547	27.573	60.28	1.767	-.19
1800.0	2.245	34.575	27.621	55.62	1.884	-.19
1889.7	2.112	34.599	27.652	52.65	1.932	-.18

STATION: 53

DATE: 8/ 9/90

1006 GMT

LAT: 37° 22.5 N.

LON: 123° 21.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.745	33.170	24.398	352.07	0.000	0.85
5.0	15.765	33.175	24.398	352.23	0.018	0.86
10.0	15.762	33.178	24.401	352.14	0.035	0.86
15.0	15.727	33.176	24.408	351.63	0.053	0.85
20.0	15.541	33.158	24.435	349.22	0.070	0.79
25.0	13.687	33.048	24.744	319.82	0.087	0.30
30.0	12.398	33.043	24.995	295.98	0.102	0.03
40.0	10.985	33.027	25.243	272.53	0.131	-.25
50.0	11.189	33.448	25.534	245.11	0.157	0.12
60.0	10.797	33.581	25.708	228.78	0.180	0.15
70.0	10.249	33.671	25.873	213.26	0.202	0.13
80.0	9.695	33.740	26.021	199.39	0.223	0.09
100.0	9.572	33.862	26.137	188.80	0.261	0.16
120.0	9.380	33.932	26.223	180.99	0.298	0.19
140.0	9.236	34.011	26.309	173.25	0.334	0.23
160.0	9.012	34.020	26.352	169.51	0.368	0.20
180.0	8.599	34.035	26.429	162.46	0.401	0.14
200.0	8.478	34.080	26.483	157.68	0.433	0.16
250.0	8.161	34.134	26.574	149.83	0.510	0.15
300.0	7.721	34.150	26.652	143.11	0.584	0.10
350.0	6.945	34.106	26.727	136.26	0.653	-.04
400.0	6.795	34.145	26.779	132.02	0.720	-.03
450.0	6.463	34.167	26.840	126.64	0.785	-.06
500.0	5.875	34.135	26.891	121.93	0.847	-.16
550.0	5.641	34.182	26.957	116.04	0.907	-.15
600.0	5.354	34.232	27.031	109.34	0.964	-.15
650.0	5.274	34.269	27.070	106.17	1.018	-.13
700.0	5.036	34.309	27.130	100.74	1.070	-.13
750.0	4.822	34.335	27.175	96.71	1.119	-.13
800.0	4.632	34.356	27.213	93.33	1.166	-.13
1000.0	3.842	34.439	27.364	79.49	1.340	-.15
1200.0	3.314	34.490	27.457	71.02	1.491	-.16
1400.0	2.932	34.532	27.526	64.77	1.627	-.17
1600.0	2.595	34.559	27.579	59.92	1.751	-.18
1651.7	2.528	34.565	27.589	58.98	1.782	-.18

STATION: 54

DATE: 8/ 9/90

1130 GMT

LAT: 37° 22.3 N.

LON: 123° 23.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.084	33.105	24.272	364.09	0.000	0.88
5.0	16.086	33.105	24.272	364.28	0.018	0.88
10.0	16.078	33.104	24.273	364.30	0.036	0.87
15.0	15.725	33.088	24.340	358.10	0.055	0.78
20.0	14.087	33.095	24.698	324.11	0.072	0.42
25.0	13.199	33.085	24.871	307.68	0.087	0.22
30.0	11.733	33.049	25.125	283.60	0.102	-.09
40.0	10.779	33.071	25.314	265.83	0.130	-.25
50.0	10.876	33.468	25.606	238.26	0.155	0.08
60.0	10.913	33.602	25.704	229.19	0.178	0.19
70.0	10.493	33.653	25.818	218.55	0.200	0.16
80.0	10.054	33.690	25.922	208.87	0.222	0.11
100.0	9.778	33.838	26.084	193.86	0.262	0.18
120.0	9.443	33.903	26.190	184.14	0.300	0.18
140.0	9.308	33.971	26.266	177.35	0.336	0.21
160.0	8.843	33.992	26.356	169.00	0.370	0.15
180.0	8.679	34.030	26.412	164.08	0.404	0.15
200.0	8.574	34.041	26.437	162.01	0.436	0.14
250.0	8.096	34.081	26.542	152.80	0.515	0.10
300.0	7.718	34.134	26.640	144.20	0.590	0.09
350.0	7.053	34.104	26.710	137.90	0.660	-.03
400.0	6.731	34.144	26.786	131.23	0.727	-.04
450.0	6.438	34.165	26.842	126.42	0.792	-.07
500.0	5.895	34.141	26.893	121.77	0.854	-.15
550.0	5.653	34.174	26.949	116.84	0.913	-.16
600.0	5.398	34.228	27.023	110.18	0.970	-.15
650.0	5.242	34.276	27.079	105.24	1.024	-.13
700.0	4.900	34.320	27.154	98.27	1.075	-.13
750.0	4.674	34.342	27.197	94.36	1.123	-.14
800.0	4.458	34.369	27.242	90.25	1.169	-.14
1000.0	3.921	34.427	27.346	81.31	1.338	-.15
1051.6	3.761	34.446	27.378	78.43	1.380	-.16

STATION: 55

DATE: 8/ 9/90

1230 GMT

LAT: 37° 21.9 N.

LON: 123° 25.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.329	33.094	24.208	370.20	0.000	0.92
5.0	16.327	33.094	24.209	370.32	0.019	0.92
10.0	16.069	33.082	24.258	365.73	0.037	0.85
15.0	15.378	33.076	24.407	351.66	0.055	0.69
20.0	14.016	33.041	24.672	326.60	0.072	0.36
25.0	12.619	33.024	24.938	301.33	0.088	0.06
30.0	11.932	33.021	25.066	289.21	0.102	-.08
40.0	10.632	33.074	25.342	263.13	0.130	-.28
50.0	10.865	33.426	25.575	241.22	0.155	0.04
60.0	11.003	33.631	25.711	228.58	0.179	0.23
70.0	10.505	33.636	25.802	220.04	0.201	0.15
80.0	10.126	33.700	25.917	209.30	0.223	0.13
100.0	9.506	33.784	26.086	193.56	0.263	0.09
120.0	9.339	33.867	26.179	185.12	0.301	0.13
140.0	9.048	33.943	26.286	175.35	0.337	0.14
160.0	8.833	33.984	26.352	169.40	0.371	0.14
180.0	8.611	34.034	26.426	162.73	0.404	0.14
200.0	8.515	34.078	26.475	158.40	0.437	0.16
250.0	7.987	34.121	26.589	148.30	0.513	0.12
300.0	7.543	34.132	26.663	141.89	0.585	0.06
350.0	7.156	34.145	26.729	136.26	0.655	0.02
400.0	6.780	34.163	26.795	130.49	0.721	-.02
450.0	6.399	34.178	26.857	124.97	0.785	-.06
500.0	5.977	34.158	26.896	121.58	0.847	-.13
550.0	5.633	34.185	26.960	115.77	0.906	-.15
600.0	5.362	34.222	27.022	110.18	0.963	-.16
650.0	5.131	34.249	27.071	105.87	1.017	-.16
700.0	4.953	34.299	27.132	100.44	1.068	-.14
750.0	4.800	34.331	27.174	96.73	1.117	-.14
800.0	4.570	34.361	27.224	92.20	1.164	-.14
940.2	4.055	34.417	27.324	83.14	1.287	-.15

STATION: 56

DATE: 8/ 9/90

1318 GMT

LAT: 37° 21.7 N.

LON: 123° 26.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.200	33.089	24.234	367.77	0.000	0.89
5.0	16.211	33.089	24.231	368.14	0.018	0.89
10.0	16.117	33.085	24.250	366.57	0.037	0.87
15.0	15.892	33.067	24.287	363.16	0.055	0.80
20.0	15.469	33.041	24.361	356.24	0.073	0.68
25.0	13.649	33.058	24.759	318.38	0.090	0.30
30.0	12.292	33.078	25.042	291.50	0.105	0.04
40.0	11.090	33.106	25.286	268.48	0.133	-.17
50.0	10.270	33.125	25.444	253.61	0.159	-.30
60.0	10.053	33.286	25.606	238.36	0.184	-.21
70.0	10.302	33.541	25.763	223.72	0.207	0.04
80.0	10.189	33.658	25.874	213.42	0.229	0.11
100.0	9.604	33.767	26.057	196.33	0.270	0.09
120.0	9.321	33.871	26.185	184.56	0.308	0.13
140.0	8.978	33.947	26.300	174.02	0.344	0.13
160.0	8.813	34.001	26.368	167.86	0.378	0.15
180.0	8.553	34.042	26.441	161.23	0.411	0.14
200.0	8.464	34.080	26.485	157.46	0.443	0.16
250.0	7.941	34.129	26.602	147.03	0.519	0.12
300.0	7.484	34.129	26.669	141.27	0.591	0.05
350.0	7.163	34.140	26.724	136.74	0.660	0.01
400.0	6.793	34.174	26.802	129.84	0.727	-.01
450.0	6.207	34.141	26.853	125.18	0.791	-.11
500.0	5.736	34.153	26.922	118.83	0.852	-.16
550.0	5.552	34.188	26.972	114.53	0.910	-.16
600.0	5.378	34.224	27.022	110.24	0.967	-.15
650.0	5.045	34.273	27.100	103.02	1.020	-.15
700.0	4.876	34.310	27.149	98.72	1.070	-.14
750.0	4.758	34.342	27.188	95.40	1.119	-.13
800.0	4.590	34.363	27.223	92.31	1.166	-.13
1000.0	3.930	34.429	27.347	81.27	1.338	-.15
1200.0	3.389	34.485	27.446	72.27	1.491	-.16
1400.0	2.887	34.531	27.530	64.27	1.627	-.17
1519.4	2.601	34.559	27.578	59.58	1.701	-.17

STATION: 57

DATE: 8/ 9/90

1418 GMT

LAT: 37° 21.4 N.

LON: 123° 28.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.059	33.078	24.257	365.53	0.000	0.85
5.0	16.064	33.077	24.256	365.83	0.018	0.85
10.0	16.062	33.077	24.256	365.95	0.037	0.85
15.0	16.053	33.076	24.258	365.94	0.055	0.84
20.0	15.611	33.067	24.350	357.32	0.073	0.74
25.0	14.641	33.048	24.546	338.73	0.090	0.50
30.0	12.727	33.057	24.942	301.02	0.106	0.11
40.0	11.367	33.126	25.252	271.73	0.135	-.10
50.0	10.306	33.167	25.470	251.11	0.161	-.26
60.0	9.933	33.239	25.590	239.93	0.186	-.27
70.0	10.249	33.415	25.674	232.20	0.209	-.07
80.0	10.295	33.572	25.789	221.50	0.232	0.06
100.0	9.904	33.732	25.981	203.68	0.274	0.12
120.0	9.458	33.817	26.121	190.72	0.313	0.11
140.0	9.211	33.899	26.225	181.16	0.350	0.13
160.0	8.908	33.971	26.330	171.50	0.386	0.14
180.0	8.706	34.014	26.395	165.65	0.419	0.14
200.0	8.427	34.041	26.460	159.79	0.452	0.12
250.0	8.015	34.103	26.571	150.04	0.529	0.11
300.0	7.603	34.130	26.653	142.88	0.602	0.07
350.0	7.156	34.141	26.725	136.56	0.672	0.01
400.0	6.878	34.162	26.781	131.90	0.739	-.01
450.0	6.406	34.154	26.837	126.87	0.804	-.08
500.0	5.809	34.158	26.917	119.38	0.866	-.15
550.0	5.528	34.181	26.969	114.72	0.924	-.17
600.0	5.319	34.226	27.030	109.35	0.980	-.16
650.0	5.017	34.282	27.110	102.00	1.033	-.15
700.0	4.869	34.310	27.150	98.62	1.083	-.14
750.0	4.753	34.342	27.188	95.34	1.131	-.13
800.0	4.606	34.364	27.223	92.40	1.178	-.13
1000.0	3.942	34.433	27.349	81.12	1.350	-.15
1200.0	3.296	34.499	27.466	70.14	1.500	-.16
1400.0	2.873	34.537	27.536	63.68	1.635	-.17
1600.0	2.512	34.567	27.592	58.37	1.757	-.18
1800.0	2.278	34.589	27.630	54.97	1.870	-.18
2000.0	2.048	34.613	27.669	51.31	1.976	-.18
2200.0	1.909	34.629	27.693	49.23	2.077	-.18
2230.4	1.902	34.630	27.695	49.18	2.091	-.18

STATION: 58

DATE: 8/ 9/90

1648 GMT

LAT: 37° 20.1 N.

LON: 123° 36.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.242	33.082	24.219	369.19	0.000	0.89
5.0	16.244	33.081	24.217	369.48	0.018	0.89
10.0	16.243	33.081	24.218	369.57	0.037	0.89
15.0	16.145	33.076	24.236	367.97	0.055	0.87
20.0	15.281	33.063	24.418	350.75	0.073	0.66
25.0	13.218	33.017	24.815	313.03	0.090	0.17
30.0	13.015	33.014	24.853	309.54	0.105	0.13
40.0	11.519	33.031	25.150	281.40	0.135	-0.15
50.0	10.891	33.191	25.388	259.02	0.162	-0.14
60.0	10.083	33.254	25.576	241.22	0.187	-0.23
70.0	9.858	33.374	25.708	228.93	0.211	-0.17
80.0	9.482	33.435	25.817	218.68	0.233	-0.19
100.0	9.249	33.677	26.045	197.46	0.274	-0.04
120.0	9.303	33.865	26.183	184.73	0.312	0.12
140.0	9.085	33.905	26.250	178.77	0.348	0.12
160.0	8.906	33.965	26.326	171.94	0.383	0.14
180.0	8.674	34.017	26.403	164.92	0.417	0.14
200.0	8.515	34.036	26.443	161.48	0.450	0.13
250.0	8.075	34.104	26.563	150.80	0.528	0.12
300.0	7.533	34.116	26.652	142.92	0.601	0.05
350.0	6.967	34.119	26.734	135.58	0.671	-0.03
400.0	6.693	34.162	26.806	129.38	0.737	-0.03
450.0	6.123	34.142	26.865	123.98	0.801	-0.12
500.0	5.804	34.155	26.915	119.56	0.861	-0.15
550.0	5.487	34.181	26.974	114.21	0.920	-0.17
600.0	5.259	34.226	27.038	108.57	0.976	-0.16
650.0	5.111	34.269	27.089	104.12	1.029	-0.15
700.0	4.952	34.301	27.133	100.32	1.080	-0.14
750.0	4.757	34.333	27.181	96.07	1.129	-0.14
800.0	4.542	34.359	27.225	92.02	1.176	-0.14
1000.0	3.921	34.441	27.357	80.28	1.347	-0.14
1200.0	3.326	34.488	27.454	71.31	1.498	-0.16
1400.0	2.881	34.535	27.534	63.94	1.634	-0.17
1600.0	2.541	34.564	27.587	58.93	1.757	-0.18
1800.0	2.284	34.588	27.629	55.09	1.870	-0.18
2000.0	2.069	34.611	27.665	51.72	1.977	-0.18
2200.0	1.930	34.628	27.691	49.56	2.078	-0.18
2400.0	1.816	34.641	27.711	47.92	2.175	-0.18
2600.0	1.740	34.651	27.726	46.90	2.270	-0.18
2800.0	1.665	34.661	27.741	45.83	2.363	-0.17
3000.0	1.620	34.666	27.749	45.47	2.454	-0.17
3200.0	1.601	34.668	27.754	45.65	2.545	-0.18
3349.7	1.581	34.672	27.759	45.53	2.614	-0.18

STATION: 59

DATE: 8/ 9/90

1930 GMT

LAT: 37° 18.6 N.

LON: 123° 44.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.356	33.045	24.164	374.38	0.000	0.89
5.0	16.359	33.045	24.164	374.57	0.019	0.89
10.0	16.339	33.046	24.169	374.22	0.037	0.89
15.0	16.284	33.047	24.183	373.11	0.056	0.88
20.0	15.820	33.043	24.285	363.52	0.075	0.76
25.0	15.085	33.021	24.429	349.87	0.092	0.58
30.0	13.463	32.987	24.743	320.06	0.109	0.20
40.0	12.845	32.956	24.842	310.84	0.141	0.05
50.0	11.275	33.022	25.188	278.03	0.170	-.20
60.0	11.384	33.286	25.374	260.62	0.197	0.03
70.0	10.312	33.239	25.526	246.24	0.222	-.20
80.0	9.923	33.351	25.679	231.84	0.246	-.18
100.0	9.361	33.573	25.945	206.95	0.289	-.10
120.0	9.014	33.718	26.114	191.19	0.329	-.04
140.0	8.755	33.837	26.249	178.79	0.365	0.01
160.0	8.536	33.950	26.371	167.49	0.400	0.07
180.0	8.336	33.983	26.428	162.41	0.433	0.06
200.0	8.147	34.009	26.477	158.07	0.465	0.05
250.0	7.670	34.072	26.597	147.35	0.541	0.03
300.0	7.140	34.083	26.681	139.88	0.613	-.03
350.0	6.912	34.133	26.753	133.77	0.681	-.03
400.0	6.392	34.145	26.832	126.62	0.746	-.09
450.0	6.098	34.173	26.892	121.39	0.808	-.10
500.0	5.643	34.168	26.945	116.54	0.867	-.16
550.0	5.394	34.202	27.002	111.49	0.924	-.17
600.0	5.170	34.241	27.060	106.38	0.979	-.16
650.0	4.965	34.266	27.103	102.54	1.031	-.17
700.0	4.770	34.311	27.161	97.34	1.081	-.15
750.0	4.556	34.332	27.202	93.69	1.129	-.16
800.0	4.481	34.360	27.233	91.19	1.175	-.15
1000.0	3.923	34.454	27.367	79.34	1.345	-.13
1200.0	3.326	34.498	27.462	70.57	1.496	-.16
1400.0	2.944	34.532	27.525	64.91	1.631	-.17
1600.0	2.622	34.565	27.581	59.82	1.756	-.17
1800.0	2.302	34.588	27.627	55.34	1.870	-.18
2000.0	2.077	34.611	27.665	51.83	1.977	-.18
2200.0	1.945	34.626	27.688	49.90	2.079	-.18
2400.0	1.832	34.642	27.711	48.05	2.177	-.17
2600.0	1.754	34.654	27.727	46.86	2.272	-.17
2800.0	1.683	34.662	27.740	46.00	2.365	-.17
3000.0	1.633	34.666	27.748	45.64	2.456	-.17
3200.0	1.606	34.672	27.757	45.44	2.547	-.17
3400.0	1.576	34.676	27.763	45.31	2.638	-.17
3493.7	1.557	34.679	27.768	45.09	2.680	-.17

STATION: 60

DATE: 8/ 9/90

2348 GMT

LAT: 37° 25.0 N.

LON: 123° 36.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.917	33.115	24.318	359.77	0.000	0.84
5.0	15.759	33.142	24.374	354.59	0.018	0.83
10.0	15.328	33.269	24.567	336.26	0.035	0.83
15.0	15.222	33.316	24.627	330.76	0.052	0.84
20.0	14.560	33.330	24.781	316.25	0.068	0.71
25.0	13.224	33.369	25.085	287.34	0.083	0.46
30.0	12.653	33.377	25.205	276.02	0.097	0.35
40.0	11.233	33.419	25.504	247.78	0.123	0.11
50.0	10.138	33.386	25.670	232.11	0.147	-.12
60.0	10.342	33.562	25.773	222.62	0.170	0.06
70.0	9.957	33.651	25.908	209.96	0.192	0.06
80.0	9.863	33.703	25.964	204.81	0.212	0.09
100.0	9.699	33.849	26.106	191.77	0.252	0.18
120.0	9.520	33.897	26.173	185.76	0.289	0.18
140.0	9.273	33.957	26.260	177.85	0.326	0.19
160.0	9.116	34.033	26.346	170.12	0.360	0.22
180.0	8.959	34.047	26.382	167.06	0.394	0.21
200.0	8.694	34.072	26.443	161.50	0.427	0.19
250.0	8.246	34.113	26.544	152.68	0.505	0.15
300.0	7.625	34.116	26.639	144.23	0.579	0.06
350.0	7.226	34.123	26.701	138.88	0.650	0.01
400.0	6.677	34.120	26.775	132.28	0.718	-.07
450.0	6.176	34.140	26.856	124.85	0.782	-.12
500.0	5.833	34.177	26.929	118.29	0.843	-.13
550.0	5.846	34.246	26.982	113.97	0.901	-.08
600.0	5.515	34.259	27.033	109.36	0.957	-.11
650.0	5.350	34.288	27.076	105.71	1.011	-.11
700.0	4.999	34.297	27.125	101.18	1.063	-.14
750.0	4.705	34.310	27.168	97.11	1.112	-.16
800.0	4.522	34.343	27.215	92.97	1.160	-.16
1000.0	3.980	34.431	27.343	81.72	1.334	-.15
1200.0	3.400	34.493	27.451	71.81	1.487	-.15
1400.0	2.978	34.525	27.517	65.81	1.624	-.17
1600.0	2.621	34.560	27.577	60.19	1.749	-.17
1800.0	2.257	34.589	27.632	54.73	1.865	-.18
2000.0	2.069	34.610	27.665	51.79	1.971	-.18
2200.0	1.899	34.631	27.696	48.96	2.072	-.18
2400.0	1.803	34.644	27.715	47.53	2.169	-.18
2600.0	1.732	34.652	27.727	46.72	2.263	-.18
2800.0	1.660	34.662	27.742	45.69	2.355	-.17
3000.0	1.629	34.666	27.749	45.60	2.447	-.17
3200.0	1.602	34.669	27.754	45.60	2.538	-.18
3273.5	1.595	34.670	27.756	45.65	2.571	-.18

## Farallones

27 August - 1 September

This survey was performed aboard the USNS DeSteiguer during the period 27 August through 1 September 1990. The survey consisted of 40 CTD casts off the central California coast (Figure 3). The CTD temperature calibration coefficient is 0.99983 (slope) with an intercept of 0.00197; the pressure calibration coefficient is 0.99946 with intercepts determined by individual casts as described earlier (p4). Table 3 contains a comparison of final CTD salinities with bottle salinities sampled at the same stations and depths.

The scientific party consisted of Curt Collins (chief Scientist), Thomas Rago, and Andy Anderson of the Naval Postgraduate School; Bob Stanley of WHOI; and Shannon Allen and Allison Murray, of UCSC.

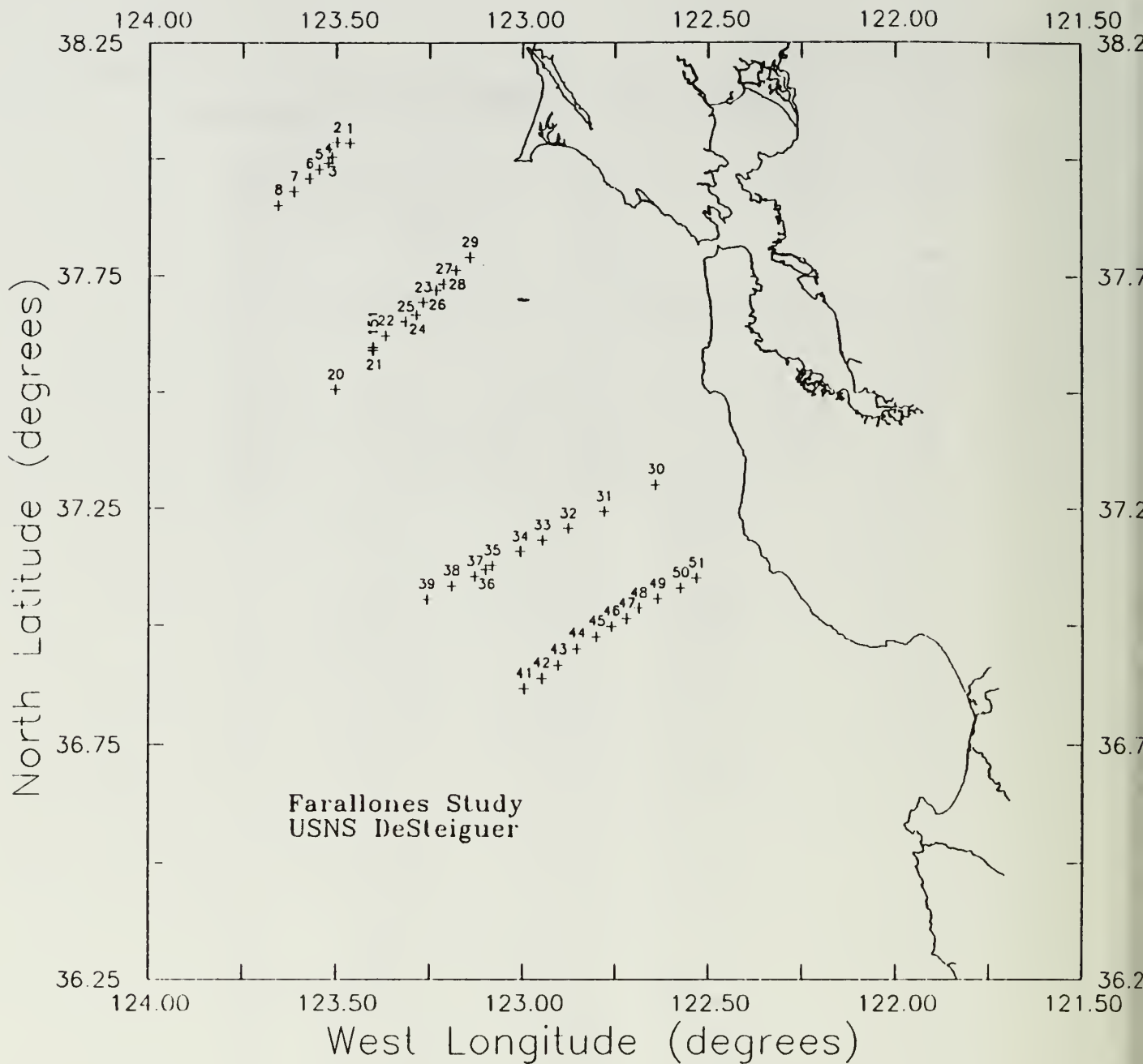
**Table 3. Comparison of CTD and Bottle Salinity Measurements  
Farallones -- Late August**

The original data were acquired during the period from 27 August through 1 September 1990 aboard the USNS DeSteiguer. Salinity values from the corrected CTD file are compared with bottle salinities from the same depth.

STATION	PRESSURE (dbar)	SALINITY (psu)		
		CTD	BOTTLE	DIFFERENCE
28	115.6	33.818	33.820	-0.002
27	199.5	33.998	33.900	0.098
27	1004.5	34.458	34.451	0.007
27	1067.2	34.470	34.467	0.003
26	165.2	33.973	33.922	0.051
26	995.8	34.464	34.459	0.005
26	1276.4	34.530	34.525	0.005
25	997.2	34.451	34.440	0.011
23	998.4	34.445	34.436	0.009
23	1694.0	34.583	34.580	0.003
24	1002.2	34.452	34.447	0.005
22	1001.0	34.453	34.447	0.006
21	1000.4	34.436	34.431	0.005
20	1021.8	34.451	34.445	0.006
20	1021.8	34.452	34.445	0.007
20	2525.4	34.654	34.651	0.003
2	194.6	33.936	33.933	0.003
1	108.2	33.765	33.768	-0.003
3	969.6	34.454	34.451	0.003
4	1006.9	34.449	34.443	0.006
5	1002.9	34.440	34.428	0.012
6	999.9	34.430	34.427	0.003
7	1021.4	34.441	34.430	0.011
8	1001.6	34.438	34.428	0.010
38	1002.1	34.447	34.439	0.008
37	1002.2	34.455	34.449	0.006
36	1002.0	34.462	34.462	0.000
34	632.6	34.244	34.246	-0.002
33	526.5	34.172	34.177	-0.005
33	526.5	34.172	34.178	-0.006
32	376.0	34.112	34.117	-0.005
31	176.1	33.862	33.868	-0.006
30	80.1	33.693	33.696	-0.003
51	96.6	33.739	33.741	-0.002
50	98.6	33.749	33.750	-0.001
49	210.1	34.102	34.102	0.000
47	637.9	34.303	34.303	0.000

**Table 3.** (continued)

STATION	PRESSURE (dbar)	SALINITY (psu)		
		CTD	BOTTLE	DIFFERENCE
45	998.8	34.451	34.457	-0.006
44	1000.2	34.445	34.449	-0.004
42	1004.2	34.456	34.460	-0.004
42	2694.1	34.651	34.656	-0.005
43	1009.2	34.449	34.453	-0.004
43	2258.6	34.635	34.638	-0.003
41	954.7	34.449	34.457	-0.008
41	2888.4	34.662	34.667	-0.005
39	4.4	33.372	33.372	0.000
39	1001.3	34.440	34.444	-0.004
39	1335.7	34.519	34.522	-0.003
39	2184.2	34.630	34.628	0.002
29	57.6	33.628	33.635	-0.007



**Figure 3. Hydrographic Stations: Farallones -- Late August**  
Positions shown were occupied by USNS DeSteiguer during  
the period 27 August through 1 September 1990.

# DATA PRESENTATION

STATION: 151

DATE: 7/ 7/90

0518 GMT

LAT: 37° 35.8 N.

LON: 123° 24.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.739	33.529	25.305	265.71	0.000	0.48
5.0	12.745	33.529	25.304	265.94	0.013	0.49
10.0	12.761	33.530	25.302	266.28	0.027	0.49
15.0	11.807	33.446	25.419	255.30	0.040	0.24
20.0	10.758	33.415	25.585	239.56	0.052	0.02
25.0	9.868	33.392	25.719	226.87	0.064	-.16
30.0	9.816	33.582	25.877	212.05	0.075	-.02
40.0	9.594	33.668	25.981	202.33	0.095	0.02
50.0	9.426	33.718	26.047	196.25	0.115	0.03
60.0	9.156	33.764	26.127	188.82	0.135	0.02
70.0	8.956	33.801	26.187	183.26	0.153	0.02
80.0	8.738	33.862	26.270	175.61	0.171	0.03
100.0	8.667	33.932	26.336	169.72	0.206	0.07
120.0	8.587	33.955	26.367	167.14	0.239	0.08
140.0	8.466	33.994	26.416	162.82	0.272	0.09
160.0	8.383	34.003	26.436	161.29	0.304	0.09
180.0	8.339	34.027	26.462	159.19	0.337	0.10
200.0	8.250	34.034	26.481	157.72	0.368	0.09
250.0	7.622	34.060	26.595	147.55	0.445	0.02
300.0	7.283	34.112	26.684	139.72	0.517	0.01
350.0	7.065	34.114	26.717	137.31	0.586	-.02
400.0	6.710	34.152	26.796	130.34	0.653	-.04
450.0	6.331	34.174	26.863	124.38	0.717	-.07
500.0	5.939	34.200	26.933	117.99	0.777	-.10
550.0	5.667	34.223	26.986	113.36	0.834	-.12
600.0	5.449	34.250	27.034	109.16	0.890	-.12
650.0	5.265	34.274	27.075	105.67	0.944	-.13
700.0	5.007	34.305	27.130	100.67	0.996	-.13
750.0	4.757	34.329	27.178	96.32	1.045	-.14
800.0	4.604	34.355	27.216	93.05	1.092	-.14
1000.0	3.920	34.440	27.356	80.35	1.265	-.14
1200.0	3.403	34.492	27.450	71.91	1.417	-.15
1400.0	2.964	34.530	27.522	65.28	1.554	-.17
1600.0	2.594	34.562	27.581	59.70	1.679	-.17
1800.0	2.227	34.593	27.637	54.08	1.793	-.18
2000.0	2.054	34.614	27.669	51.29	1.898	-.18
2077.2	2.025	34.619	27.676	50.91	1.937	-.18

STATION: 1                      DATE: 8/29/90                      2253 GMT

LAT: 38° 2.0 N.                      LON: 123° 27.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.440	33.204	24.267	364.57	0.000	1.04
5.0	16.211	33.199	24.316	360.05	0.018	0.98
10.0	15.628	33.141	24.403	351.96	0.036	0.80
15.0	13.502	32.982	24.731	320.82	0.053	0.21
20.0	13.166	33.077	24.871	307.55	0.069	0.21
25.0	11.486	33.081	25.194	276.90	0.083	-.11
30.0	10.304	33.127	25.439	253.61	0.096	-.29
40.0	9.972	33.256	25.596	238.87	0.121	-.25
50.0	9.834	33.298	25.652	233.79	0.145	-.24
60.0	9.830	33.425	25.752	224.52	0.167	-.14
70.0	9.850	33.505	25.812	219.07	0.189	-.07
80.0	9.850	33.537	25.836	216.92	0.211	-.05
100.0	10.004	33.748	25.976	204.14	0.253	0.15
107.4	9.975	33.765	25.994	202.56	0.268	0.16

STATION: 2                      DATE: 8/29/90                      2211 GMT

LAT: 38° 2.1 N.                      LON: 123° 29.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.659	33.225	24.233	367.85	0.000	1.11
5.0	16.631	33.226	24.240	367.33	0.018	1.10
10.0	16.386	33.214	24.287	362.96	0.037	1.03
15.0	15.711	33.164	24.402	352.20	0.055	0.84
20.0	14.383	33.071	24.618	331.68	0.072	0.46
25.0	13.784	33.156	24.808	313.76	0.088	0.40
30.0	12.559	33.129	25.031	292.62	0.103	0.13
40.0	11.093	33.067	25.255	271.41	0.131	-.20
50.0	10.368	33.109	25.414	256.43	0.157	-.30
60.0	10.008	33.178	25.530	245.63	0.182	-.30
70.0	9.787	33.346	25.698	229.86	0.206	-.21
80.0	10.114	33.596	25.839	216.75	0.228	0.05
100.0	10.075	33.762	25.975	204.28	0.271	0.17
120.0	9.853	33.821	26.059	196.68	0.310	0.18
140.0	9.600	33.890	26.155	187.91	0.349	0.19
160.0	9.568	33.897	26.166	187.29	0.386	0.19
180.0	9.461	33.923	26.204	184.05	0.423	0.19
193.4	9.298	33.936	26.241	180.78	0.448	0.18

STATION: 3 DATE: 8/29/90 2353 GMT

LAT: 38° 0.2 N. LON: 123° 30.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.257	33.145	24.264	364.90	0.000	0.95
5.0	16.127	33.150	24.297	361.87	0.018	0.92
10.0	15.839	33.133	24.349	357.06	0.036	0.84
15.0	14.472	33.012	24.552	337.83	0.054	0.44
20.0	12.817	32.937	24.832	311.26	0.070	0.03
25.0	12.547	33.154	25.053	290.40	0.085	0.15
30.0	12.670	33.266	25.116	284.50	0.099	0.26
40.0	12.300	33.376	25.273	269.85	0.127	0.28
50.0	11.059	33.414	25.532	245.36	0.152	0.07
60.0	10.712	33.507	25.666	232.83	0.176	0.08
70.0	10.620	33.583	25.741	225.85	0.199	0.12
80.0	10.209	33.622	25.842	216.44	0.221	0.08
100.0	9.588	33.703	26.010	200.82	0.263	0.04
120.0	9.738	33.842	26.094	193.27	0.302	0.18
140.0	9.535	33.902	26.175	186.05	0.340	0.19
160.0	9.426	33.925	26.211	182.97	0.377	0.19
180.0	9.142	33.948	26.276	177.17	0.413	0.16
200.0	8.870	33.979	26.343	171.06	0.448	0.14
250.0	8.038	34.034	26.513	155.48	0.530	0.06
300.0	7.471	34.075	26.629	145.09	0.604	0.01
350.0	7.073	34.094	26.700	138.91	0.675	-.04
400.0	6.455	34.099	26.787	130.92	0.743	-.12
450.0	6.045	34.107	26.847	125.56	0.807	-.16
500.0	5.654	34.157	26.935	117.47	0.868	-.17
550.0	5.393	34.196	26.998	111.89	0.924	-.17
600.0	5.205	34.246	27.060	106.43	0.979	-.16
650.0	4.940	34.280	27.118	101.15	1.031	-.16
700.0	4.632	34.333	27.194	94.04	1.080	-.15
750.0	4.469	34.359	27.233	90.65	1.126	-.15
800.0	4.294	34.384	27.272	87.14	1.170	-.15
968.8	3.712	34.454	27.388	76.60	1.308	-.15

STATION: 4 DATE: 8/30/90 0111 GMT

LAT: 37° 59.4 N. LON: 123° 31.3 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.737	33.151	24.158	374.99	0.000	1.07
5.0	16.885	33.165	24.134	377.41	0.019	1.11
10.0	15.605	33.140	24.407	351.58	0.037	0.79
15.0	14.389	33.108	24.643	329.20	0.055	0.50
20.0	12.915	33.112	24.948	300.21	0.070	0.19
25.0	12.607	33.246	25.113	284.69	0.085	0.23
30.0	12.672	33.325	25.161	280.20	0.099	0.31
40.0	12.184	33.403	25.316	265.76	0.126	0.27
50.0	10.848	33.447	25.595	239.34	0.152	0.06
60.0	10.686	33.572	25.721	227.58	0.175	0.13
70.0	10.239	33.596	25.817	218.62	0.197	0.07
80.0	9.972	33.639	25.896	211.29	0.219	0.06
100.0	9.670	33.760	26.041	197.91	0.260	0.10
120.0	9.497	33.828	26.123	190.51	0.298	0.13
140.0	9.499	33.912	26.188	184.73	0.336	0.19
160.0	9.222	33.933	26.250	179.18	0.372	0.16
180.0	8.973	34.005	26.346	170.40	0.407	0.18
200.0	8.776	34.023	26.392	166.37	0.441	0.16
250.0	7.915	34.027	26.527	154.16	0.521	0.03
300.0	7.458	34.076	26.631	144.85	0.596	0.00
350.0	6.992	34.103	26.718	137.10	0.666	-.04
400.0	6.393	34.106	26.800	129.59	0.733	-.12
450.0	5.815	34.109	26.876	122.52	0.796	-.19
500.0	5.532	34.141	26.937	117.18	0.856	-.20
550.0	5.280	34.193	27.008	110.76	0.912	-.19
600.0	4.974	34.225	27.069	105.18	0.967	-.20
650.0	4.757	34.271	27.130	99.68	1.018	-.19
700.0	4.729	34.315	27.169	96.54	1.067	-.16
750.0	4.552	34.348	27.216	92.42	1.114	-.15
800.0	4.407	34.370	27.249	89.53	1.159	-.15
1000.0	3.800	34.447	27.374	78.40	1.326	-.15
1182.5	3.260	34.501	27.471	69.46	1.461	-.16

STATION: 5

DATE: 8/30/90

0241 GMT

LAT: 37° 58.6 N.

LON: 123° 32.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.365	33.148	24.466	345.66	0.000	0.74
5.0	15.275	33.137	24.477	344.69	0.017	0.72
10.0	14.217	33.091	24.667	326.75	0.034	0.45
15.0	12.726	33.120	24.991	295.99	0.050	0.16
20.0	12.541	33.216	25.102	285.58	0.064	0.20
25.0	12.336	33.283	25.193	277.06	0.078	0.21
30.0	11.518	33.339	25.390	258.40	0.092	0.10
40.0	10.836	33.436	25.588	239.74	0.116	0.05
50.0	10.741	33.570	25.709	228.44	0.140	0.14
60.0	10.387	33.591	25.788	221.21	0.162	0.09
70.0	10.215	33.649	25.862	214.32	0.184	0.11
80.0	9.981	33.714	25.953	205.89	0.205	0.12
100.0	9.855	33.828	26.063	195.85	0.245	0.18
120.0	9.701	33.864	26.118	191.04	0.284	0.19
140.0	9.379	33.892	26.192	184.33	0.321	0.16
160.0	9.405	33.972	26.251	179.19	0.357	0.22
180.0	9.155	34.021	26.330	172.00	0.392	0.22
200.0	8.647	33.987	26.384	167.07	0.426	0.11
250.0	7.987	34.030	26.518	155.03	0.507	0.05
300.0	7.369	34.061	26.632	144.73	0.581	-.02
350.0	7.040	34.140	26.741	135.03	0.651	0.00
400.0	6.317	34.102	26.808	128.82	0.717	-.13
450.0	6.184	34.160	26.871	123.44	0.780	-.10
500.0	5.836	34.178	26.929	118.27	0.841	-.13
550.0	5.585	34.233	27.004	111.55	0.898	-.12
600.0	4.852	34.192	27.057	106.13	0.953	-.24
650.0	4.686	34.236	27.111	101.37	1.005	-.22
700.0	4.625	34.284	27.156	97.56	1.055	-.19
750.0	4.615	34.336	27.199	94.08	1.103	-.15
800.0	4.389	34.372	27.252	89.19	1.148	-.15
1000.0	3.793	34.437	27.367	79.05	1.316	-.16
1200.0	3.309	34.496	27.462	70.55	1.464	-.16
1400.0	2.903	34.534	27.531	64.26	1.598	-.17
1600.0	2.575	34.565	27.585	59.27	1.721	-.17
1708.6	2.376	34.584	27.618	56.07	1.784	-.17

STATION: 6 DATE: 8/30/90 0336 GMT

LAT: 37° 57.4 N. LON: 123° 34.3 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.132	33.128	24.279	363.44	0.000	0.90
5.0	15.975	33.128	24.315	360.17	0.018	0.87
10.0	13.956	33.151	24.768	317.15	0.035	0.44
15.0	12.505	33.220	25.112	284.54	0.050	0.19
20.0	11.921	33.331	25.309	265.88	0.064	0.17
25.0	11.511	33.409	25.446	252.96	0.077	0.15
30.0	11.054	33.399	25.520	245.99	0.089	0.06
40.0	10.872	33.546	25.668	232.18	0.113	0.14
50.0	10.568	33.625	25.783	221.48	0.136	0.15
60.0	10.528	33.642	25.803	219.74	0.158	0.16
70.0	10.430	33.686	25.854	215.10	0.180	0.17
80.0	10.206	33.731	25.928	208.25	0.201	0.17
100.0	9.992	33.789	26.010	200.94	0.242	0.18
120.0	9.440	33.826	26.130	189.78	0.281	0.11
140.0	9.519	33.916	26.189	184.68	0.318	0.20
160.0	9.310	33.928	26.232	180.96	0.355	0.17
180.0	8.974	33.949	26.303	174.53	0.390	0.13
200.0	8.648	33.954	26.358	169.53	0.424	0.09
250.0	7.917	34.047	26.541	152.76	0.504	0.05
300.0	7.325	34.079	26.653	142.74	0.578	-.01
350.0	6.944	34.136	26.751	133.99	0.647	-.02
400.0	6.413	34.117	26.807	128.98	0.713	-.11
450.0	6.044	34.165	26.893	121.24	0.776	-.12
500.0	5.764	34.189	26.946	116.55	0.835	-.13
550.0	5.539	34.221	27.000	111.87	0.892	-.14
600.0	5.359	34.260	27.052	107.33	0.947	-.13
650.0	5.048	34.264	27.092	103.71	1.000	-.16
700.0	4.494	34.269	27.158	97.15	1.050	-.22
750.0	4.306	34.304	27.206	92.80	1.097	-.21
800.0	4.202	34.338	27.245	89.49	1.143	-.19
1000.0	3.814	34.430	27.360	79.78	1.311	-.16
1200.0	3.292	34.497	27.465	70.25	1.460	-.16
1400.0	2.906	34.534	27.531	64.28	1.595	-.17
1600.0	2.499	34.573	27.598	57.78	1.716	-.17
1800.0	2.252	34.595	27.637	54.20	1.828	-.18
2000.0	2.052	34.616	27.671	51.14	1.934	-.18
2200.0	1.891	34.634	27.699	48.63	2.033	-.18
2216.7	1.880	34.636	27.701	48.42	2.041	-.17

STATION: 7

DATE: 8/30/90

0530 GMT

LAT: 37° 55.7 N.

LON: 123° 36.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.5	15.996	33.147	24.324	359.13	0.002	0.89
5.0	15.858	33.136	24.347	357.12	0.018	0.85
10.0	14.315	33.075	24.634	329.91	0.035	0.45
15.0	12.079	32.967	24.996	295.51	0.051	-.09
20.0	11.813	33.124	25.168	279.24	0.065	-.02
25.0	11.924	33.344	25.318	265.13	0.079	0.18
30.0	11.761	33.378	25.376	259.78	0.092	0.17
40.0	11.425	33.445	25.490	249.15	0.117	0.16
50.0	9.751	33.255	25.632	235.67	0.141	-.29
60.0	9.985	33.383	25.693	230.12	0.165	-.15
70.0	9.739	33.435	25.776	222.46	0.187	-.15
80.0	10.060	33.626	25.871	213.69	0.209	0.06
100.0	9.505	33.675	26.002	201.59	0.250	0.01
120.0	9.491	33.882	26.166	186.44	0.289	0.17
140.0	9.226	33.962	26.272	176.71	0.325	0.19
160.0	9.172	34.001	26.311	173.38	0.360	0.21
180.0	9.009	34.028	26.359	169.22	0.394	0.20
200.0	8.769	34.077	26.435	162.30	0.427	0.20
250.0	7.917	34.055	26.548	152.15	0.506	0.06
300.0	7.395	34.078	26.642	143.78	0.580	0.00
350.0	6.988	34.124	26.735	135.51	0.650	-.02
400.0	6.445	34.118	26.803	129.38	0.716	-.10
450.0	6.160	34.161	26.874	123.11	0.779	-.11
500.0	5.867	34.213	26.953	116.05	0.839	-.10
550.0	5.648	34.234	26.997	112.31	0.896	-.11
600.0	5.413	34.254	27.042	108.41	0.951	-.12
650.0	4.994	34.248	27.086	104.24	1.004	-.18
700.0	4.735	34.273	27.135	99.73	1.055	-.19
750.0	4.414	34.295	27.188	94.77	1.104	-.21
800.0	4.347	34.336	27.228	91.34	1.151	-.18
1000.0	3.759	34.432	27.367	78.99	1.321	-.17
1200.0	3.355	34.496	27.458	71.06	1.470	-.16
1400.0	2.964	34.530	27.522	65.31	1.606	-.17
1600.0	2.536	34.568	27.591	58.59	1.730	-.17
1800.0	2.221	34.595	27.639	53.85	1.841	-.18
2000.0	2.003	34.620	27.678	50.24	1.945	-.18
2200.0	1.885	34.635	27.700	48.49	2.044	-.18
2400.0	1.774	34.649	27.721	46.79	2.139	-.17
2478.2	1.754	34.651	27.724	46.66	2.175	-.17

STATION: 8 DATE: 8/30/90 0836 GMT

LAT: 37° 54.0 N. LON: 123° 39.3 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.2	16.183	33.169	24.299	361.55	0.001	0.95
5.0	15.628	33.174	24.428	349.44	0.018	0.82
10.0	15.009	33.288	24.651	328.29	0.035	0.77
15.0	14.306	33.345	24.845	309.93	0.051	0.66
20.0	14.133	33.372	24.903	304.62	0.066	0.65
25.0	13.745	33.336	24.955	299.76	0.081	0.54
30.0	12.105	33.172	25.150	281.22	0.096	0.08
40.0	9.869	32.982	25.399	257.60	0.122	-.49
50.0	10.370	33.230	25.509	247.43	0.147	-.20
60.0	10.196	33.383	25.658	233.48	0.172	-.11
70.0	9.827	33.470	25.788	221.31	0.194	-.10
80.0	9.623	33.544	25.880	212.78	0.216	-.08
100.0	9.543	33.740	26.046	197.41	0.257	0.06
120.0	9.312	33.860	26.178	185.26	0.295	0.12
140.0	9.077	33.959	26.293	174.67	0.331	0.16
160.0	8.988	34.031	26.364	168.29	0.365	0.20
180.0	8.816	34.069	26.422	163.20	0.398	0.20
200.0	8.653	34.095	26.468	159.15	0.431	0.20
250.0	7.698	34.069	26.590	148.00	0.507	0.03
300.0	7.128	34.101	26.697	138.43	0.579	-.02
350.0	6.878	34.131	26.755	133.52	0.647	-.03
400.0	6.545	34.158	26.822	127.73	0.713	-.06
450.0	5.960	34.162	26.901	120.39	0.775	-.13
500.0	5.807	34.215	26.962	115.14	0.833	-.11
550.0	5.592	34.241	27.010	111.05	0.890	-.11
600.0	5.317	34.253	27.052	107.33	0.944	-.14
650.0	5.069	34.283	27.105	102.57	0.997	-.14
700.0	4.585	34.265	27.145	98.56	1.047	-.21
750.0	4.518	34.308	27.187	94.99	1.095	-.18
800.0	4.469	34.350	27.226	91.80	1.142	-.16
1000.0	3.725	34.439	27.375	78.14	1.311	-.16
1200.0	3.314	34.499	27.464	70.36	1.459	-.16
1400.0	2.896	34.536	27.533	64.04	1.594	-.17
1600.0	2.542	34.564	27.587	58.93	1.717	-.18
1800.0	2.222	34.594	27.639	53.93	1.830	-.18
2000.0	2.013	34.620	27.677	50.38	1.934	-.18
2200.0	1.872	34.637	27.702	48.19	2.033	-.17
2400.0	1.771	34.650	27.722	46.69	2.127	-.17
2600.0	1.731	34.655	27.730	46.48	2.221	-.17
2800.0	1.675	34.663	27.742	45.82	2.313	-.17
3000.0	1.657	34.665	27.746	46.06	2.404	-.17
3001.4	1.657	34.665	27.746	46.06	2.405	-.17

STATION: 20

DATE: 8/29/90

1630 GMT

LAT: 37° 30.3 N.

LON: 123° 30.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.957	33.384	24.515	340.92	0.000	1.07
5.0	15.910	33.405	24.542	338.52	0.017	1.07
10.0	15.450	33.405	24.645	328.89	0.034	0.97
15.0	14.663	33.411	24.821	312.28	0.050	0.79
20.0	14.395	33.442	24.902	304.70	0.065	0.76
25.0	13.530	33.424	25.067	289.08	0.080	0.56
30.0	12.816	33.492	25.262	270.62	0.094	0.47
40.0	11.855	33.555	25.495	248.64	0.120	0.33
50.0	11.262	33.606	25.644	234.67	0.144	0.26
60.0	10.810	33.645	25.756	224.26	0.167	0.21
70.0	10.527	33.683	25.836	216.89	0.189	0.19
80.0	9.969	33.732	25.969	204.38	0.210	0.13
100.0	9.698	33.859	26.114	191.03	0.249	0.18
120.0	9.319	33.940	26.240	179.41	0.286	0.18
140.0	9.146	33.992	26.309	173.22	0.322	0.20
160.0	8.995	34.043	26.372	167.53	0.355	0.21
180.0	8.832	34.074	26.423	163.09	0.389	0.21
200.0	8.592	34.098	26.479	158.04	0.421	0.19
250.0	7.881	34.145	26.624	144.95	0.496	0.12
300.0	7.240	34.108	26.687	139.40	0.568	0.00
350.0	7.011	34.132	26.738	135.26	0.636	-.01
400.0	6.698	34.151	26.796	130.31	0.702	-.04
450.0	6.067	34.132	26.863	124.06	0.766	-.14
500.0	5.828	34.190	26.940	117.25	0.826	-.12
550.0	5.100	34.163	27.005	110.78	0.883	-.23
600.0	4.778	34.196	27.069	104.95	0.937	-.24
650.0	4.777	34.254	27.115	101.12	0.988	-.20
700.0	4.580	34.279	27.157	97.43	1.038	-.20
750.0	4.470	34.325	27.206	93.17	1.085	-.18
800.0	4.374	34.360	27.245	89.88	1.131	-.16
1000.0	3.808	34.438	27.366	79.16	1.300	-.16
1200.0	3.309	34.497	27.463	70.45	1.448	-.16
1400.0	2.923	34.536	27.531	64.36	1.583	-.16
1600.0	2.532	34.567	27.590	58.63	1.706	-.18
1800.0	2.224	34.600	27.643	53.56	1.817	-.18
2000.0	2.043	34.620	27.675	50.72	1.922	-.17
2200.0	1.869	34.639	27.704	48.00	2.021	-.17
2400.0	1.801	34.647	27.717	47.29	2.116	-.17
2524.1	1.753	34.654	27.727	46.59	2.174	-.17

STATION: 21

DATE: 8/29/90

1341 GMT

LAT: 37° 35.4 N.

LON: 123° 24.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.938	33.384	24.290	362.42	0.000	1.30
5.0	16.878	33.382	24.302	361.39	0.018	1.28
10.0	16.562	33.383	24.377	354.45	0.036	1.21
15.0	15.448	33.385	24.630	330.45	0.053	0.95
20.0	14.205	33.397	24.907	304.18	0.069	0.68
25.0	13.591	33.392	25.030	292.62	0.084	0.55
30.0	13.081	33.403	25.141	282.16	0.098	0.45
40.0	11.372	33.332	25.411	256.60	0.126	0.06
50.0	10.785	33.346	25.527	245.77	0.151	-.03
60.0	10.322	33.402	25.651	234.16	0.175	-.07
70.0	9.770	33.400	25.743	225.56	0.198	-.17
80.0	9.548	33.459	25.825	217.91	0.220	-.16
100.0	9.247	33.614	25.996	202.10	0.262	-.09
120.0	9.021	33.779	26.161	186.76	0.301	0.01
140.0	8.693	33.883	26.294	174.49	0.337	0.04
160.0	8.545	33.984	26.396	165.12	0.371	0.10
180.0	8.326	33.997	26.440	161.25	0.403	0.07
200.0	8.099	34.051	26.517	154.23	0.435	0.08
250.0	7.915	34.138	26.613	145.96	0.510	0.12
300.0	7.378	34.135	26.689	139.30	0.581	0.04
350.0	6.977	34.150	26.757	133.43	0.649	0.00
400.0	6.617	34.156	26.811	128.84	0.714	-.05
450.0	6.014	34.154	26.887	121.70	0.777	-.13
500.0	5.315	34.134	26.957	115.04	0.836	-.23
550.0	4.980	34.159	27.016	109.64	0.892	-.25
600.0	4.704	34.175	27.060	105.62	0.946	-.27
650.0	4.577	34.239	27.125	99.91	0.998	-.23
700.0	4.447	34.284	27.175	95.47	1.046	-.21
750.0	4.241	34.325	27.230	90.50	1.093	-.20
800.0	4.160	34.356	27.264	87.64	1.138	-.18
1000.0	3.729	34.435	27.372	78.42	1.302	-.17
1200.0	3.281	34.501	27.469	69.82	1.450	-.16
1400.0	2.863	34.541	27.540	63.29	1.582	-.17
1600.0	2.505	34.568	27.593	58.25	1.703	-.18
1800.0	2.165	34.601	27.649	52.75	1.813	-.18
2000.0	1.992	34.624	27.682	49.83	1.916	-.17
2140.4	1.901	34.634	27.698	48.53	1.986	-.17

STATION: 22

DATE: 8/29/90

1141 GMT

LAT: 37° 37.3 N.

LON: 123° 22.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.845	33.319	24.262	365.10	0.000	1.22
5.0	16.852	33.324	24.264	365.03	0.018	1.23
10.0	16.783	33.326	24.282	363.50	0.036	1.21
15.0	16.250	33.343	24.417	350.73	0.054	1.10
20.0	14.941	33.319	24.690	324.88	0.071	0.78
25.0	13.704	33.264	24.908	304.25	0.087	0.47
30.0	12.391	33.214	25.129	283.25	0.102	0.16
40.0	10.878	33.235	25.424	255.35	0.128	-.11
50.0	10.401	33.282	25.544	244.15	0.153	-.15
60.0	10.057	33.373	25.674	231.99	0.177	-.14
70.0	9.770	33.454	25.785	221.56	0.200	-.13
80.0	9.534	33.518	25.874	213.32	0.221	-.11
100.0	9.231	33.653	26.029	198.93	0.263	-.06
120.0	9.071	33.746	26.127	189.97	0.302	-.01
140.0	8.830	33.853	26.250	178.70	0.338	0.04
160.0	8.476	33.933	26.367	167.89	0.373	0.04
180.0	8.381	33.997	26.432	162.08	0.406	0.08
200.0	8.140	34.016	26.484	157.42	0.438	0.06
250.0	7.909	34.127	26.606	146.69	0.514	0.11
300.0	7.491	34.140	26.677	140.56	0.586	0.06
350.0	7.026	34.151	26.751	134.05	0.654	0.00
400.0	6.635	34.155	26.808	129.14	0.720	-.05
450.0	6.150	34.145	26.864	124.10	0.783	-.12
500.0	5.634	34.174	26.951	115.99	0.844	-.16
550.0	5.211	34.172	26.999	111.49	0.900	-.21
600.0	4.728	34.174	27.057	105.98	0.955	-.27
650.0	4.638	34.230	27.111	101.25	1.007	-.23
700.0	4.481	34.273	27.163	96.70	1.056	-.22
750.0	4.331	34.305	27.205	92.98	1.104	-.21
800.0	4.221	34.341	27.246	89.47	1.149	-.19
1000.0	3.711	34.452	27.387	76.95	1.315	-.16
1200.0	3.210	34.508	27.481	68.51	1.459	-.16
1400.0	2.826	34.539	27.541	63.00	1.591	-.17
1600.0	2.481	34.569	27.596	57.86	1.712	-.18
1800.0	2.091	34.610	27.661	51.23	1.820	-.18
1946.5	1.983	34.623	27.681	49.58	1.895	-.18

STATION: 23

DATE: 8/29/90

0830 GMT

LAT: 37° 41.6 N.

LON: 123° 16.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.2	16.292	33.376	24.433	348.76	0.001	1.14
5.0	16.245	33.386	24.452	347.14	0.017	1.13
10.0	16.141	33.396	24.484	344.27	0.035	1.12
15.0	15.367	33.389	24.651	328.43	0.052	0.93
20.0	15.001	33.377	24.722	321.80	0.068	0.84
25.0	13.847	33.339	24.936	301.56	0.083	0.56
30.0	12.640	33.310	25.156	280.75	0.098	0.29
40.0	11.410	33.326	25.400	257.67	0.125	0.07
50.0	10.688	33.396	25.583	240.42	0.150	-.01
60.0	10.444	33.507	25.712	228.34	0.173	0.03
70.0	10.610	33.708	25.841	216.43	0.196	0.22
80.0	10.402	33.726	25.890	211.89	0.217	0.20
100.0	9.838	33.768	26.019	199.98	0.258	0.13
120.0	9.447	33.863	26.158	187.14	0.297	0.14
140.0	9.344	33.969	26.258	178.07	0.333	0.21
160.0	8.963	34.023	26.362	168.49	0.368	0.19
180.0	8.566	34.032	26.431	162.20	0.401	0.14
200.0	8.456	34.055	26.467	159.16	0.433	0.14
250.0	8.220	34.109	26.545	152.55	0.511	0.14
300.0	7.605	34.127	26.650	143.14	0.585	0.07
350.0	7.006	34.135	26.742	134.92	0.654	-.01
400.0	6.502	34.101	26.783	131.37	0.721	-.11
450.0	6.085	34.123	26.854	124.93	0.785	-.14
500.0	5.951	34.190	26.924	118.87	0.846	-.11
550.0	5.528	34.205	26.988	112.96	0.904	-.15
600.0	5.295	34.237	27.042	108.22	0.959	-.15
650.0	4.837	34.234	27.092	103.39	1.012	-.21
700.0	4.703	34.292	27.154	97.95	1.062	-.18
750.0	4.615	34.324	27.189	94.98	1.110	-.16
800.0	4.491	34.359	27.231	91.41	1.157	-.15
1000.0	3.816	34.445	27.371	78.70	1.326	-.15
1200.0	3.288	34.504	27.470	69.68	1.475	-.16
1400.0	2.869	34.544	27.541	63.16	1.608	-.16
1600.0	2.571	34.570	27.590	58.85	1.730	-.17
1694.6	2.428	34.583	27.612	56.69	1.785	-.17

STATION: 24

DATE: 8/29/90

1011 GMT

LAT: 37° 40.0 N.

LON: 123° 17.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.2	15.573	33.258	24.504	341.97	0.001	0.88
5.0	15.999	33.396	24.515	341.11	0.017	1.08
10.0	16.007	33.396	24.514	341.39	0.034	1.09
15.0	15.857	33.393	24.545	338.56	0.051	1.05
20.0	15.494	33.377	24.614	332.14	0.068	0.95
25.0	13.820	33.291	24.905	304.55	0.084	0.52
30.0	12.780	33.236	25.071	288.81	0.099	0.26
40.0	11.570	33.215	25.284	268.68	0.127	0.01
50.0	11.098	33.351	25.476	250.68	0.153	0.03
60.0	10.862	33.587	25.701	229.44	0.177	0.17
70.0	10.759	33.646	25.766	223.55	0.199	0.20
80.0	10.435	33.639	25.817	218.84	0.221	0.14
100.0	9.768	33.763	26.027	199.21	0.263	0.12
120.0	9.436	33.920	26.204	182.77	0.301	0.19
140.0	9.266	33.992	26.289	175.12	0.337	0.22
160.0	8.652	33.995	26.388	165.89	0.371	0.12
180.0	8.416	34.005	26.433	161.98	0.404	0.09
200.0	8.285	34.065	26.500	155.92	0.435	0.12
250.0	7.989	34.118	26.587	148.49	0.511	0.12
300.0	7.598	34.136	26.659	142.37	0.584	0.07
350.0	7.161	34.147	26.729	136.19	0.654	0.02
400.0	6.412	34.111	26.802	129.42	0.721	-.11
450.0	6.063	34.117	26.852	125.11	0.784	-.15
500.0	5.814	34.149	26.909	120.13	0.846	-.16
550.0	5.375	34.174	26.982	113.35	0.904	-.19
600.0	4.843	34.184	27.051	106.66	0.959	-.25
650.0	4.750	34.258	27.121	100.49	1.011	-.20
700.0	4.514	34.284	27.168	96.24	1.060	-.20
750.0	4.394	34.308	27.201	93.50	1.107	-.20
800.0	4.398	34.360	27.242	90.20	1.153	-.16
1000.0	3.776	34.451	27.380	77.81	1.320	-.15
1200.0	3.231	34.500	27.473	69.32	1.467	-.16
1400.0	2.867	34.540	27.538	63.44	1.599	-.17
1600.0	2.486	34.576	27.601	57.41	1.718	-.17
1800.0	2.189	34.604	27.649	52.81	1.829	-.17
1908.5	2.085	34.614	27.666	51.30	1.885	-.18

STATION: 25

DATE: 8/29/90

0530 GMT

LAT: 37° 39.1 N.

LON: 123° 18.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.923	33.352	24.269	364.42	0.000	1.27
5.0	16.818	33.358	24.298	361.75	0.018	1.25
10.0	16.598	33.361	24.352	356.83	0.036	1.20
15.0	15.794	33.383	24.551	337.97	0.053	1.03
20.0	14.906	33.354	24.723	321.72	0.070	0.80
25.0	12.791	33.290	25.110	284.94	0.085	0.30
30.0	11.955	33.233	25.226	273.96	0.099	0.09
40.0	11.041	33.218	25.382	259.36	0.126	-.09
50.0	9.998	33.206	25.553	243.21	0.151	-.28
60.0	10.029	33.395	25.695	229.91	0.174	-.13
70.0	10.304	33.583	25.796	220.62	0.197	0.07
80.0	10.220	33.597	25.822	218.39	0.219	0.07
100.0	9.757	33.780	26.042	197.82	0.260	0.13
120.0	9.474	33.895	26.179	185.18	0.299	0.17
140.0	9.070	33.936	26.276	176.25	0.335	0.14
160.0	8.559	33.931	26.353	169.21	0.369	0.06
180.0	8.316	33.981	26.429	162.26	0.402	0.06
200.0	8.225	34.035	26.486	157.25	0.434	0.09
250.0	7.845	34.121	26.610	146.23	0.510	0.10
300.0	7.544	34.136	26.666	141.58	0.582	0.06
350.0	7.112	34.144	26.734	135.71	0.651	0.01
400.0	6.692	34.149	26.795	130.36	0.717	-.04
450.0	6.182	34.127	26.845	125.89	0.781	-.13
500.0	5.735	34.139	26.911	119.86	0.843	-.18
550.0	5.129	34.148	26.990	112.26	0.901	-.24
600.0	4.705	34.174	27.059	105.74	0.955	-.27
650.0	4.710	34.238	27.110	101.54	1.007	-.22
700.0	4.598	34.278	27.154	97.73	1.056	-.20
750.0	4.414	34.301	27.193	94.26	1.104	-.20
800.0	4.299	34.339	27.236	90.54	1.151	-.18
1000.0	3.759	34.452	27.382	77.55	1.319	-.15
1200.0	3.266	34.502	27.471	69.54	1.467	-.16
1400.0	2.828	34.540	27.542	62.98	1.598	-.17
1600.0	2.499	34.570	27.595	58.01	1.719	-.18
1800.0	2.240	34.599	27.641	53.78	1.830	-.17
2000.0	1.989	34.624	27.682	49.79	1.932	-.17
2085.9	1.921	34.632	27.694	48.72	1.974	-.17

STATION: 26

DATE: 8/29/90

0318 GMT

LAT: 37° 43.1 N.

LON: 123° 14.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.744	33.388	24.338	357.81	0.000	1.25
5.0	16.579	33.388	24.376	354.33	0.018	1.21
10.0	16.283	33.390	24.446	347.83	0.035	1.15
15.0	15.917	33.385	24.525	340.44	0.053	1.06
20.0	14.202	33.334	24.858	308.83	0.069	0.63
25.0	13.121	33.304	25.056	290.07	0.084	0.38
30.0	11.978	33.357	25.319	265.21	0.098	0.20
40.0	10.790	33.402	25.569	241.52	0.123	0.01
50.0	10.473	33.432	25.649	234.20	0.147	-.02
60.0	10.211	33.515	25.758	223.98	0.170	0.00
70.0	10.547	33.663	25.816	218.72	0.192	0.18
80.0	10.115	33.671	25.897	211.24	0.213	0.11
100.0	9.828	33.761	26.015	200.36	0.254	0.13
120.0	9.566	33.862	26.138	189.09	0.294	0.16
140.0	9.434	33.910	26.198	183.83	0.331	0.18
160.0	9.223	33.960	26.271	177.19	0.367	0.18
180.0	8.948	33.999	26.346	170.46	0.402	0.17
200.0	8.815	34.011	26.377	167.86	0.435	0.16
250.0	8.449	34.099	26.502	156.74	0.516	0.17
300.0	7.729	34.128	26.633	144.83	0.590	0.08
350.0	7.041	34.120	26.725	136.54	0.661	-.02
400.0	6.504	34.129	26.804	129.35	0.727	-.09
450.0	5.910	34.119	26.873	122.97	0.790	-.17
500.0	5.684	34.163	26.936	117.43	0.851	-.16
550.0	5.421	34.208	27.004	111.35	0.908	-.16
600.0	5.239	34.256	27.063	106.13	0.962	-.14
650.0	5.082	34.287	27.106	102.45	1.014	-.14
700.0	4.855	34.306	27.148	98.71	1.064	-.15
750.0	4.559	34.355	27.220	91.99	1.112	-.14
800.0	4.435	34.379	27.253	89.20	1.157	-.14
1000.0	3.639	34.469	27.408	74.89	1.321	-.15
1200.0	3.125	34.521	27.499	66.54	1.464	-.16
1274.9	3.020	34.530	27.516	65.14	1.514	-.16

STATION: 27

DATE: 8/29/90

0123 GMT

LAT: 37° 43.9 N.

LON: 123° 12.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.779	33.252	24.226	368.53	0.000	1.16
5.0	16.758	33.289	24.259	365.50	0.018	1.18
10.0	16.295	33.290	24.367	355.39	0.037	1.07
15.0	15.499	33.317	24.566	336.51	0.054	0.91
20.0	14.182	33.288	24.828	311.76	0.070	0.59
25.0	12.373	33.231	25.146	281.51	0.085	0.18
30.0	11.793	33.238	25.261	270.70	0.099	0.07
40.0	11.551	33.435	25.458	252.13	0.125	0.18
50.0	10.778	33.420	25.586	240.14	0.149	0.02
60.0	10.384	33.464	25.689	230.60	0.173	-.01
70.0	10.219	33.627	25.844	216.02	0.195	0.09
80.0	10.406	33.703	25.872	213.66	0.217	0.18
100.0	9.884	33.774	26.017	200.26	0.258	0.15
120.0	9.700	33.852	26.108	191.97	0.297	0.18
140.0	9.521	33.888	26.166	186.82	0.335	0.18
160.0	9.244	33.938	26.250	179.18	0.372	0.17
180.0	9.062	33.964	26.300	174.77	0.407	0.16
200.0	8.894	34.000	26.356	169.87	0.442	0.16
250.0	8.346	34.128	26.541	153.05	0.522	0.18
300.0	7.472	34.100	26.648	143.27	0.596	0.03
350.0	7.174	34.118	26.705	138.52	0.666	0.00
400.0	6.642	34.125	26.783	131.44	0.733	-.07
450.0	5.994	34.135	26.875	122.84	0.797	-.15
500.0	5.652	34.141	26.922	118.69	0.857	-.18
550.0	5.560	34.193	26.975	114.23	0.914	-.16
600.0	5.393	34.248	27.039	108.60	0.970	-.13
650.0	5.173	34.288	27.097	103.45	1.023	-.13
700.0	4.896	34.328	27.161	97.61	1.073	-.13
750.0	4.644	34.357	27.212	92.90	1.121	-.13
800.0	4.350	34.391	27.272	87.29	1.165	-.14
1000.0	3.781	34.456	27.383	77.53	1.329	-.15
1066.6	3.645	34.470	27.408	75.40	1.380	-.15

STATION: 28                      DATE: 8/27/90                      2236 GMT

LAT: 37° 45.7 N.                      LON: 123° 10.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.377	33.359	24.401	351.85	0.000	1.14
5.0	16.367	33.360	24.404	351.68	0.018	1.14
10.0	16.103	33.363	24.467	345.85	0.035	1.08
15.0	15.402	33.367	24.626	330.86	0.052	0.93
20.0	13.610	33.348	24.992	296.08	0.068	0.52
25.0	13.345	33.406	25.090	286.85	0.082	0.51
30.0	11.701	33.342	25.359	261.38	0.096	0.13
40.0	10.741	33.410	25.585	240.04	0.121	0.01
50.0	10.540	33.589	25.760	223.66	0.144	0.12
60.0	10.381	33.692	25.867	213.63	0.166	0.17
70.0	10.244	33.692	25.891	211.61	0.187	0.14
80.0	10.265	33.733	25.920	209.09	0.208	0.18
100.0	9.792	33.793	26.047	197.37	0.249	0.15
115.2	9.692	33.818	26.083	194.25	0.279	0.15

STATION: 29                      DATE: 8/27/90                      2136 GMT

LAT: 37° 47.3 N.                      LON: 123° 8.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.132	33.330	24.434	348.65	0.000	1.06
5.0	16.121	33.343	24.447	347.63	0.017	1.07
10.0	15.814	33.350	24.522	340.62	0.035	1.01
15.0	15.458	33.362	24.610	332.34	0.052	0.93
20.0	14.521	33.419	24.857	308.94	0.068	0.77
25.0	13.021	33.434	25.176	278.65	0.082	0.47
30.0	12.024	33.433	25.369	260.44	0.096	0.27
40.0	11.104	33.532	25.615	237.20	0.120	0.17
50.0	10.764	33.614	25.740	225.58	0.143	0.18
57.1	10.656	33.628	25.770	222.88	0.159	0.17

STATION: 30                      DATE: 8/31/90                      0218 GMT

LAT: 37° 18.1 N.                      LON: 122° 38.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.579	33.462	24.660	327.14	0.000	1.04
5.0	15.543	33.467	24.672	326.12	0.016	1.04
10.0	14.885	33.462	24.812	312.93	0.032	0.88
15.0	14.118	33.487	24.994	295.75	0.048	0.74
20.0	13.179	33.513	25.206	275.67	0.062	0.56
25.0	12.676	33.538	25.326	264.45	0.075	0.48
30.0	12.032	33.564	25.469	250.92	0.088	0.37
40.0	11.485	33.593	25.593	239.29	0.113	0.29
50.0	10.936	33.631	25.722	227.23	0.136	0.22
60.0	10.849	33.650	25.753	224.56	0.158	0.22
70.0	10.616	33.669	25.809	219.42	0.181	0.19
79.1	10.582	33.693	25.834	217.29	0.200	0.20

STATION: 31                      DATE: 8/31/90                      0048 GMT

LAT: 37° 14.6 N.                      LON: 122° 46.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.701	33.360	24.327	358.90	0.000	1.22
5.0	16.612	33.405	24.382	353.76	0.018	1.24
10.0	16.142	33.382	24.472	345.36	0.035	1.11
15.0	15.784	33.404	24.570	336.14	0.052	1.04
20.0	15.547	33.422	24.637	329.96	0.069	1.00
25.0	15.190	33.414	24.710	323.18	0.085	0.91
30.0	14.031	33.419	24.960	299.41	0.101	0.66
40.0	12.355	33.380	25.265	270.57	0.130	0.29
50.0	10.696	33.409	25.591	239.64	0.155	0.00
60.0	10.915	33.529	25.647	234.65	0.179	0.13
70.0	10.536	33.634	25.796	220.68	0.201	0.15
80.0	10.293	33.639	25.841	216.52	0.223	0.11
100.0	10.143	33.753	25.957	206.00	0.265	0.18
120.0	9.797	33.802	26.053	197.23	0.306	0.15
140.0	9.853	33.836	26.071	195.97	0.345	0.19
160.0	9.853	33.839	26.074	196.11	0.384	0.19
175.0	9.762	33.862	26.107	193.27	0.413	0.20

STATION: 32

DATE: 8/30/90

2330 GMT

LAT: 37° 12.4 N.

LON: 122° 52.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	17.922	33.266	23.964	393.43	0.000	1.45
5.0	17.919	33.266	23.965	393.53	0.020	1.44
10.0	17.113	33.283	24.171	374.09	0.039	1.26
15.0	15.372	33.327	24.603	333.06	0.057	0.89
20.0	15.048	33.359	24.698	324.14	0.073	0.84
25.0	14.723	33.379	24.783	316.15	0.089	0.78
30.0	13.894	33.415	24.986	296.93	0.104	0.63
40.0	13.002	33.449	25.193	277.52	0.133	0.47
50.0	12.289	33.427	25.314	266.15	0.160	0.31
60.0	11.662	33.483	25.476	250.98	0.186	0.24
70.0	11.253	33.592	25.636	235.95	0.210	0.25
80.0	11.029	33.611	25.691	230.96	0.233	0.22
100.0	10.182	33.642	25.863	214.90	0.278	0.09
120.0	9.097	33.590	26.001	201.91	0.319	-.13
140.0	9.007	33.741	26.134	189.75	0.359	-.02
160.0	8.862	33.853	26.245	179.55	0.395	0.04
180.0	8.749	33.950	26.339	170.99	0.430	0.10
200.0	8.339	33.991	26.434	162.25	0.464	0.07
250.0	8.219	34.123	26.557	151.48	0.542	0.15
300.0	7.679	34.150	26.658	142.50	0.615	0.09
350.0	7.083	34.112	26.712	137.74	0.686	-.02
374.9	6.602	34.112	26.778	131.54	0.719	-.09

STATION: 33

DATE: 8/30/90

2236 GMT

LAT: 37° 10.9 N.

LON: 122° 56.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	17.800	33.267	23.995	390.54	0.000	1.42
5.0	17.714	33.265	24.015	388.82	0.020	1.39
10.0	16.986	33.280	24.199	371.37	0.038	1.23
15.0	16.129	33.290	24.404	351.98	0.057	1.03
20.0	14.728	33.310	24.729	321.14	0.073	0.73
25.0	13.720	33.347	24.969	298.42	0.089	0.54
30.0	12.675	33.318	25.155	280.79	0.103	0.30
40.0	11.075	33.194	25.358	261.67	0.130	-1.10
50.0	11.103	33.318	25.449	253.22	0.156	0.00
60.0	11.102	33.585	25.657	233.70	0.180	0.21
70.0	10.795	33.692	25.795	220.75	0.203	0.24
80.0	10.615	33.736	25.861	214.70	0.225	0.24
100.0	10.355	33.793	25.951	206.58	0.267	0.24
120.0	10.171	33.825	26.009	201.53	0.308	0.24
140.0	9.906	33.868	26.087	194.48	0.347	0.22
160.0	9.650	33.921	26.171	186.81	0.385	0.22
180.0	9.040	33.919	26.268	177.79	0.422	0.12
200.0	8.686	33.960	26.357	169.67	0.456	0.10
250.0	8.262	34.095	26.528	154.23	0.537	0.14
300.0	7.856	34.139	26.623	145.86	0.612	0.11
350.0	7.477	34.177	26.709	138.38	0.683	0.09
400.0	6.947	34.185	26.789	131.15	0.750	0.02
450.0	6.412	34.191	26.866	124.15	0.814	-0.05
500.0	5.767	34.166	26.928	118.26	0.874	-0.15
525.2	5.718	34.172	26.939	117.50	0.904	-0.15

STATION: 34                      DATE: 8/30/90                      2130 GMT

LAT: 37° 9.4 N.                      LON: 123° 0.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	17.486	33.286	24.085	381.95	0.000	1.35
5.0	17.276	33.285	24.135	377.37	0.019	1.30
10.0	16.177	33.258	24.369	355.21	0.037	1.02
15.0	14.682	33.186	24.642	329.26	0.055	0.62
20.0	12.167	33.030	25.029	292.54	0.070	-.03
25.0	11.929	32.964	25.022	293.25	0.085	-.13
30.0	11.549	32.930	25.066	289.19	0.099	-.22
40.0	10.779	33.046	25.294	267.65	0.127	-.27
50.0	10.738	33.231	25.445	253.52	0.153	-.13
60.0	11.087	33.533	25.620	237.23	0.178	0.17
70.0	10.597	33.706	25.841	216.40	0.200	0.22
80.0	10.377	33.804	25.955	205.72	0.221	0.26
100.0	10.266	33.841	26.004	201.52	0.262	0.27
120.0	10.165	33.869	26.044	198.21	0.302	0.27
140.0	9.961	33.906	26.107	192.55	0.341	0.26
160.0	9.775	33.945	26.169	187.07	0.379	0.26
180.0	9.579	33.982	26.231	181.56	0.416	0.26
200.0	9.184	34.014	26.320	173.37	0.451	0.22
250.0	7.969	34.024	26.516	155.16	0.533	0.04
300.0	7.828	34.173	26.654	142.96	0.607	0.13
350.0	7.346	34.180	26.729	136.35	0.677	0.07
400.0	6.565	34.134	26.800	129.79	0.744	-.07
450.0	6.421	34.179	26.855	125.21	0.808	-.06
500.0	6.307	34.223	26.905	121.09	0.869	-.04
550.0	5.563	34.186	26.969	114.81	0.928	-.16
600.0	5.465	34.246	27.029	109.68	0.984	-.13
631.2	5.222	34.244	27.056	107.14	1.018	-.16

STATION: 35                      DATE: 8/30/90                      2006 GMT

LAT: 37° 7.6 N.                      LON: 123° 4.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.3	17.804	33.273	23.998	390.20	0.001	1.42
5.0	17.686	33.263	24.020	388.35	0.019	1.38
10.0	17.565	33.273	24.056	385.02	0.039	1.36
15.0	17.423	33.280	24.096	381.42	0.058	1.33
20.0	16.778	33.331	24.287	363.34	0.077	1.22
25.0	15.609	33.400	24.606	333.08	0.094	1.00
30.0	14.102	33.446	24.966	298.85	0.110	0.70
40.0	11.014	33.549	25.645	234.39	0.136	0.17
50.0	10.679	33.662	25.792	220.58	0.159	0.20
60.0	10.535	33.712	25.856	214.70	0.181	0.21
70.0	10.473	33.766	25.910	209.86	0.202	0.24
80.0	10.326	33.805	25.965	204.78	0.223	0.25
100.0	10.142	33.864	26.043	197.80	0.263	0.26
120.0	10.006	33.895	26.091	193.69	0.302	0.26
140.0	9.805	33.950	26.168	186.79	0.340	0.27
160.0	9.669	33.991	26.223	181.94	0.377	0.28
180.0	9.585	34.007	26.250	179.79	0.413	0.28
200.0	9.424	34.026	26.291	176.25	0.449	0.27
250.0	8.691	34.096	26.464	160.54	0.533	0.21
300.0	8.122	34.124	26.573	150.84	0.611	0.14
350.0	7.487	34.158	26.692	139.96	0.683	0.07
400.0	7.017	34.160	26.760	134.00	0.752	0.01
450.0	6.505	34.190	26.853	125.48	0.816	-.04
500.0	6.007	34.178	26.908	120.50	0.877	-.11
550.0	5.977	34.265	26.981	114.28	0.936	-.05
600.0	5.293	34.235	27.041	108.34	0.992	-.15
650.0	5.073	34.274	27.097	103.27	1.045	-.15
700.0	4.868	34.338	27.172	96.54	1.095	-.12
750.0	4.575	34.352	27.216	92.43	1.142	-.14
800.0	4.365	34.379	27.260	88.41	1.187	-.15
949.2	3.882	34.441	27.361	79.39	1.311	-.15

STATION: 36                      DATE: 8/30/90                      1900 GMT

LAT: 37° 7.1 N.                      LON: 123° 6.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	17.794	33.268	23.997	390.33	0.000	1.42
5.0	17.702	33.268	24.019	388.39	0.019	1.39
10.0	17.492	33.278	24.078	382.97	0.039	1.35
15.0	17.024	33.309	24.212	370.28	0.058	1.26
20.0	16.245	33.400	24.463	346.57	0.076	1.14
25.0	14.651	33.431	24.838	310.93	0.092	0.81
30.0	13.135	33.463	25.176	278.85	0.107	0.51
40.0	10.672	33.554	25.709	228.28	0.131	0.11
50.0	10.659	33.662	25.796	220.23	0.154	0.19
60.0	10.547	33.685	25.833	216.87	0.176	0.19
70.0	10.396	33.743	25.904	210.34	0.197	0.21
80.0	10.322	33.792	25.956	205.67	0.218	0.24
100.0	10.216	33.850	26.019	200.08	0.258	0.26
120.0	10.027	33.888	26.082	194.51	0.298	0.26
140.0	9.887	33.918	26.129	190.49	0.336	0.26
160.0	9.772	33.963	26.184	185.66	0.374	0.28
180.0	9.630	33.997	26.234	181.27	0.410	0.28
200.0	9.384	34.039	26.307	174.66	0.446	0.27
250.0	8.835	34.095	26.440	162.84	0.530	0.23
300.0	8.266	34.146	26.568	151.39	0.608	0.18
350.0	7.723	34.173	26.670	142.21	0.682	0.12
400.0	6.978	34.161	26.766	133.39	0.750	0.00
450.0	6.579	34.199	26.850	125.81	0.815	-.02
500.0	5.854	34.184	26.932	118.02	0.876	-.13
550.0	5.874	34.263	26.992	113.08	0.934	-.06
600.0	5.262	34.240	27.048	107.55	0.989	-.15
650.0	5.056	34.281	27.105	102.52	1.042	-.15
700.0	4.793	34.313	27.161	97.45	1.092	-.15
750.0	4.540	34.357	27.224	91.61	1.139	-.14
800.0	4.364	34.380	27.262	88.28	1.184	-.14
1000.0	3.769	34.461	27.389	76.96	1.348	-.14
1200.0	3.227	34.509	27.480	68.60	1.492	-.16
1334.8	2.949	34.535	27.527	64.33	1.581	-.16

STATION: 37                      DATE: 8/30/90                      1706 GMT

LAT: 37° 6.2 N.                      LON: 123° 7.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	17.600	33.281	24.054	384.92	0.000	1.38
5.0	17.578	33.281	24.059	384.60	0.019	1.37
10.0	17.451	33.288	24.095	381.32	0.038	1.35
15.0	16.062	33.376	24.486	344.21	0.057	1.08
20.0	14.015	33.468	25.001	295.23	0.073	0.70
25.0	11.672	33.602	25.566	241.56	0.086	0.33
30.0	11.000	33.627	25.707	228.19	0.098	0.23
40.0	10.648	33.665	25.800	219.63	0.120	0.20
50.0	10.569	33.694	25.836	216.39	0.142	0.20
60.0	10.388	33.722	25.890	211.50	0.163	0.19
70.0	10.285	33.757	25.935	207.42	0.184	0.20
80.0	10.279	33.825	25.989	202.50	0.205	0.26
100.0	10.168	33.860	26.035	198.53	0.245	0.26
120.0	10.006	33.902	26.096	193.19	0.284	0.27
140.0	9.833	33.934	26.150	188.43	0.322	0.26
160.0	9.719	33.978	26.205	183.68	0.359	0.28
180.0	9.587	34.005	26.248	179.97	0.396	0.28
200.0	9.388	34.035	26.304	174.97	0.431	0.27
250.0	8.951	34.107	26.431	163.74	0.516	0.25
300.0	8.175	34.129	26.568	151.29	0.594	0.15
350.0	7.533	34.128	26.662	142.82	0.668	0.06
400.0	7.085	34.182	26.768	133.31	0.737	0.03
450.0	6.708	34.202	26.836	127.34	0.802	0.00
500.0	6.164	34.195	26.902	121.25	0.864	-.08
550.0	5.753	34.220	26.973	114.72	0.923	-.11
600.0	5.567	34.271	27.036	109.14	0.979	-.09
650.0	5.023	34.272	27.101	102.82	1.032	-.16
700.0	4.885	34.315	27.152	98.46	1.082	-.14
750.0	4.610	34.338	27.201	93.90	1.130	-.15
800.0	4.422	34.374	27.251	89.41	1.176	-.14
1000.0	3.750	34.454	27.385	77.30	1.341	-.15
1200.0	3.278	34.506	27.473	69.39	1.487	-.15
1400.0	2.850	34.544	27.543	62.94	1.619	-.17
1600.0	2.521	34.573	27.596	58.07	1.741	-.17
1800.0	2.244	34.598	27.640	53.91	1.852	-.17
1881.0	2.164	34.606	27.653	52.72	1.895	-.18

STATION: 38                      DATE: 8/30/90                      1500 GMT

LAT: 37° 5.0 N.                      LON: 123° 11.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	17.370	33.298	24.122	378.44	0.000	1.33
5.0	17.355	33.302	24.128	377.96	0.019	1.33
10.0	16.923	33.326	24.248	366.68	0.038	1.25
15.0	15.603	33.408	24.614	332.02	0.055	1.00
20.0	15.091	33.435	24.747	319.47	0.071	0.91
25.0	14.110	33.462	24.977	297.71	0.087	0.72
30.0	12.953	33.537	25.270	269.86	0.101	0.53
40.0	11.271	33.655	25.681	230.99	0.125	0.30
50.0	10.743	33.663	25.782	221.58	0.148	0.21
60.0	10.475	33.690	25.850	215.31	0.170	0.18
70.0	10.375	33.735	25.902	210.58	0.191	0.20
80.0	10.250	33.773	25.954	205.87	0.212	0.21
100.0	10.185	33.853	26.027	199.34	0.253	0.26
120.0	10.048	33.883	26.075	195.23	0.292	0.26
140.0	9.892	33.920	26.130	190.36	0.331	0.26
160.0	9.660	33.978	26.214	182.74	0.368	0.27
180.0	9.533	34.010	26.260	178.76	0.404	0.27
200.0	9.343	34.040	26.315	173.93	0.439	0.27
250.0	8.945	34.109	26.434	163.49	0.524	0.26
300.0	8.076	34.129	26.584	149.77	0.602	0.14
350.0	7.638	34.165	26.677	141.57	0.675	0.10
400.0	7.149	34.179	26.757	134.40	0.744	0.04
450.0	6.600	34.179	26.832	127.57	0.809	-.03
500.0	6.371	34.222	26.896	122.00	0.871	-.03
550.0	5.721	34.207	26.967	115.21	0.931	-.12
600.0	5.672	34.288	27.038	109.18	0.986	-.07
650.0	5.048	34.272	27.099	103.11	1.039	-.15
700.0	4.865	34.303	27.145	99.06	1.090	-.15
750.0	4.712	34.327	27.181	95.96	1.139	-.15
800.0	4.617	34.380	27.234	91.36	1.186	-.12
1000.0	3.910	34.445	27.362	79.82	1.357	-.14
1200.0	3.298	34.500	27.467	70.06	1.507	-.16
1400.0	2.885	34.535	27.533	63.99	1.641	-.17
1600.0	2.550	34.570	27.591	58.60	1.763	-.17
1800.0	2.265	34.595	27.636	54.37	1.876	-.18
2000.0	2.039	34.618	27.673	50.86	1.981	-.18
2200.0	1.871	34.637	27.703	48.17	2.080	-.17
2400.0	1.758	34.651	27.723	46.44	2.175	-.17
2498.4	1.735	34.654	27.728	46.27	2.220	-.17

STATION: 39                      DATE: 9/ 1/90                      0306 GMT

LAT: 37° 3.3 N.                      LON: 123° 15.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	17.132	33.372	24.235	367.65	0.000	1.33
5.0	17.108	33.375	24.243	367.05	0.018	1.33
10.0	17.103	33.375	24.244	367.09	0.037	1.33
15.0	17.103	33.374	24.244	367.29	0.055	1.33
20.0	15.537	33.348	24.581	335.24	0.073	0.94
25.0	13.902	33.326	24.915	303.59	0.089	0.56
30.0	12.561	33.307	25.169	279.49	0.103	0.27
40.0	11.014	33.262	25.421	255.63	0.130	-.06
50.0	10.901	33.421	25.565	242.13	0.155	0.05
60.0	11.124	33.588	25.656	233.83	0.178	0.22
70.0	10.844	33.640	25.746	225.45	0.201	0.21
80.0	10.317	33.718	25.899	211.09	0.223	0.18
100.0	9.948	33.812	26.035	198.52	0.264	0.19
120.0	9.712	33.872	26.122	190.64	0.303	0.20
140.0	9.572	33.956	26.211	182.58	0.340	0.24
160.0	9.349	34.026	26.303	174.27	0.376	0.26
180.0	9.219	34.050	26.343	170.82	0.410	0.25
200.0	9.052	34.094	26.404	165.38	0.444	0.26
250.0	8.542	34.131	26.514	155.73	0.524	0.21
300.0	7.901	34.138	26.616	146.56	0.599	0.12
350.0	7.476	34.164	26.699	139.34	0.671	0.08
400.0	6.634	34.142	26.798	130.06	0.739	-.06
450.0	6.516	34.212	26.869	124.02	0.802	-.02
500.0	6.246	34.233	26.921	119.49	0.863	-.04
550.0	5.934	34.269	26.990	113.39	0.921	-.05
600.0	5.717	34.285	27.029	110.01	0.977	-.06
650.0	5.417	34.293	27.072	106.19	1.031	-.09
700.0	5.134	34.324	27.131	100.86	1.083	-.10
750.0	4.727	34.326	27.179	96.18	1.132	-.15
800.0	4.516	34.352	27.223	92.19	1.179	-.15
1000.0	3.844	34.439	27.363	79.52	1.349	-.15
1200.0	3.355	34.492	27.455	71.35	1.500	-.16
1400.0	2.907	34.533	27.530	64.39	1.635	-.17
1600.0	2.555	34.567	27.588	58.89	1.758	-.17
1800.0	2.249	34.592	27.635	54.40	1.870	-.18
2000.0	2.058	34.611	27.666	51.58	1.976	-.18
2200.0	1.898	34.631	27.696	48.95	2.077	-.18
2400.0	1.809	34.643	27.713	47.69	2.174	-.18
2600.0	1.726	34.653	27.729	46.56	2.267	-.18
2759.6	1.677	34.659	27.738	46.00	2.341	-.17

STATION: 41

DATE: 8/31/90

2148 GMT

LAT: 36° 52.0 N.

LON: 122° 59.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	17.062	33.378	24.256	365.64	0.000	1.32
5.0	17.041	33.382	24.264	365.02	0.018	1.32
10.0	17.004	33.379	24.271	364.59	0.037	1.31
15.0	16.876	33.371	24.295	362.43	0.055	1.27
20.0	16.297	33.360	24.421	350.59	0.073	1.13
25.0	14.394	33.361	24.838	310.91	0.089	0.70
30.0	13.195	33.389	25.108	285.33	0.104	0.47
40.0	11.736	33.507	25.480	250.05	0.131	0.27
50.0	11.538	33.569	25.565	242.20	0.155	0.28
60.0	11.141	33.622	25.679	231.61	0.179	0.25
70.0	10.742	33.617	25.746	225.40	0.202	0.17
80.0	10.595	33.724	25.856	215.20	0.224	0.23
100.0	10.357	33.808	25.962	205.50	0.266	0.26
120.0	10.180	33.861	26.035	199.03	0.306	0.27
140.0	10.010	33.896	26.091	194.10	0.345	0.26
160.0	9.783	33.954	26.175	186.47	0.383	0.27
180.0	9.582	33.984	26.232	181.42	0.420	0.26
200.0	9.372	34.032	26.304	174.94	0.456	0.26
250.0	8.890	34.088	26.426	164.22	0.540	0.23
300.0	8.159	34.131	26.573	150.86	0.619	0.15
350.0	7.647	34.162	26.672	141.97	0.692	0.10
400.0	7.174	34.186	26.759	134.23	0.761	0.05
450.0	6.864	34.201	26.814	129.55	0.826	0.02
500.0	6.470	34.219	26.881	123.52	0.890	-.02
550.0	6.000	34.222	26.944	117.76	0.950	-.08
600.0	5.847	34.269	27.001	112.87	1.008	-.06
650.0	5.207	34.256	27.068	106.28	1.063	-.15
700.0	5.016	34.302	27.127	100.99	1.115	-.13
750.0	4.691	34.324	27.181	95.92	1.164	-.15
800.0	4.610	34.375	27.231	91.64	1.211	-.12
1000.0	3.811	34.464	27.387	77.27	1.378	-.14
1200.0	3.266	34.509	27.476	69.09	1.524	-.15
1400.0	2.805	34.545	27.548	62.34	1.656	-.17
1600.0	2.429	34.579	27.608	56.53	1.775	-.17
1800.0	2.187	34.603	27.648	52.86	1.885	-.18
2000.0	2.000	34.622	27.680	50.08	1.988	-.18
2200.0	1.859	34.637	27.703	48.03	2.086	-.18
2400.0	1.764	34.649	27.721	46.67	2.181	-.17
2600.0	1.713	34.655	27.731	46.26	2.273	-.17
2800.0	1.663	34.662	27.742	45.73	2.365	-.17
2891.9	1.646	34.663	27.744	45.71	2.407	-.17

STATION: 42

DATE: 8/31/90

1536 GMT

LAT: 36° 53.3 N.

LON: 122° 56.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.961	33.348	24.257	365.57	0.000	1.27
5.0	16.961	33.347	24.256	365.79	0.018	1.27
10.0	16.682	33.331	24.308	361.01	0.037	1.19
15.0	13.422	33.135	24.864	308.08	0.053	0.31
20.0	12.993	33.256	25.044	291.10	0.068	0.32
25.0	12.292	33.431	25.316	265.31	0.082	0.32
30.0	11.921	33.500	25.440	253.61	0.095	0.30
40.0	11.414	33.574	25.592	239.47	0.120	0.26
50.0	10.948	33.600	25.697	229.69	0.143	0.20
60.0	10.610	33.711	25.843	216.00	0.166	0.22
70.0	10.440	33.785	25.930	207.90	0.187	0.25
80.0	10.350	33.804	25.960	205.25	0.207	0.25
100.0	10.169	33.865	26.039	198.19	0.247	0.27
120.0	10.000	33.893	26.090	193.75	0.286	0.26
140.0	9.816	33.933	26.153	188.17	0.325	0.26
160.0	9.731	33.955	26.185	185.59	0.362	0.26
180.0	9.372	33.976	26.260	178.73	0.399	0.22
200.0	9.164	34.023	26.331	172.37	0.434	0.22
250.0	8.550	34.109	26.495	157.49	0.516	0.19
300.0	8.022	34.149	26.607	147.56	0.592	0.14
350.0	7.367	34.171	26.720	137.26	0.663	0.07
400.0	6.972	34.195	26.794	130.74	0.730	0.03
450.0	6.791	34.201	26.824	128.55	0.795	0.01
500.0	6.370	34.219	26.894	122.21	0.857	-.03
550.0	5.866	34.206	26.948	117.20	0.918	-.11
600.0	5.464	34.230	27.016	110.88	0.975	-.14
650.0	5.261	34.254	27.060	107.08	1.029	-.14
700.0	4.992	34.284	27.115	102.08	1.082	-.15
750.0	4.804	34.341	27.182	96.06	1.131	-.13
800.0	4.596	34.372	27.230	91.67	1.178	-.13
1000.0	3.807	34.455	27.380	77.88	1.346	-.14
1200.0	3.275	34.506	27.473	69.38	1.493	-.16
1400.0	2.852	34.544	27.543	62.94	1.626	-.16
1600.0	2.555	34.569	27.590	58.74	1.748	-.17
1800.0	2.236	34.595	27.638	54.03	1.860	-.18
2000.0	2.051	34.614	27.669	51.28	1.966	-.18
2200.0	1.887	34.632	27.697	48.75	2.065	-.18
2400.0	1.799	34.642	27.713	47.62	2.161	-.18
2600.0	1.734	34.650	27.726	46.88	2.256	-.18
2693.6	1.743	34.651	27.726	47.25	2.300	-.18

STATION: 43

DATE: 8/31/90

1718 GMT

LAT: 36° 55.0 N.

LON: 122° 54.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.884	33.346	24.273	363.99	0.000	1.25
5.0	16.858	33.352	24.284	363.13	0.018	1.25
10.0	16.736	33.355	24.315	360.32	0.036	1.23
15.0	15.289	33.275	24.580	335.20	0.054	0.83
20.0	14.154	33.333	24.868	307.87	0.070	0.62
25.0	13.431	33.405	25.072	288.57	0.085	0.53
30.0	12.288	33.404	25.296	267.33	0.099	0.30
40.0	11.926	33.520	25.455	252.46	0.125	0.32
50.0	11.431	33.529	25.554	243.29	0.149	0.23
60.0	10.812	33.630	25.744	225.41	0.173	0.20
70.0	10.646	33.707	25.833	217.17	0.195	0.23
80.0	10.484	33.768	25.909	210.11	0.216	0.25
100.0	10.280	33.827	25.991	202.80	0.257	0.26
120.0	10.218	33.856	26.025	200.00	0.298	0.27
140.0	9.947	33.899	26.104	192.86	0.337	0.26
160.0	9.771	33.950	26.174	186.65	0.375	0.27
180.0	9.564	33.979	26.231	181.57	0.412	0.25
200.0	9.242	34.005	26.304	174.92	0.447	0.22
250.0	8.412	34.063	26.480	158.82	0.530	0.14
300.0	7.873	34.134	26.617	146.45	0.606	0.11
350.0	7.538	34.166	26.691	140.08	0.678	0.09
400.0	7.068	34.188	26.775	132.63	0.746	0.04
450.0	6.646	34.202	26.844	126.51	0.811	-.01
500.0	6.038	34.208	26.927	118.66	0.872	-.08
550.0	5.794	34.250	26.992	112.95	0.930	-.08
600.0	5.276	34.233	27.041	108.28	0.986	-.16
650.0	5.184	34.275	27.085	104.59	1.039	-.14
700.0	4.959	34.316	27.144	99.30	1.090	-.13
750.0	4.786	34.343	27.185	95.68	1.138	-.13
800.0	4.621	34.368	27.224	92.31	1.185	-.13
1000.0	3.865	34.447	27.368	79.17	1.355	-.14
1200.0	3.308	34.506	27.470	69.76	1.503	-.15
1400.0	2.859	34.543	27.542	63.09	1.634	-.16
1600.0	2.536	34.571	27.593	58.38	1.756	-.17
1800.0	2.217	34.597	27.642	53.64	1.866	-.18
2000.0	2.001	34.619	27.677	50.31	1.970	-.18
2200.0	1.887	34.632	27.698	48.72	2.069	-.18
2257.9	1.868	34.635	27.702	48.49	2.097	-.18

STATION: 44

DATE: 8/31/90

1106 GMT

LAT: 36° 57.1 N.

LON: 122° 51.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.947	33.346	24.258	365.40	0.000	1.27
5.0	16.951	33.346	24.258	365.60	0.018	1.27
10.0	15.136	33.358	24.677	325.81	0.036	0.86
15.0	13.352	33.364	25.056	289.85	0.051	0.48
20.0	12.511	33.397	25.248	271.73	0.065	0.33
25.0	12.012	33.425	25.365	260.70	0.079	0.26
30.0	12.033	33.504	25.422	255.36	0.092	0.32
40.0	11.654	33.534	25.517	246.59	0.117	0.28
50.0	10.994	33.499	25.610	237.93	0.141	0.13
60.0	10.777	33.580	25.711	228.53	0.164	0.15
70.0	10.701	33.692	25.812	219.16	0.187	0.23
80.0	10.455	33.773	25.918	209.27	0.208	0.25
100.0	10.276	33.829	25.993	202.60	0.249	0.26
120.0	10.137	33.863	26.044	198.20	0.289	0.26
140.0	9.957	33.896	26.100	193.21	0.328	0.26
160.0	9.669	33.924	26.171	186.88	0.366	0.23
180.0	9.384	33.965	26.250	179.69	0.403	0.21
200.0	9.172	34.004	26.315	173.88	0.438	0.21
250.0	8.403	34.052	26.473	159.51	0.522	0.13
300.0	7.970	34.125	26.596	148.54	0.599	0.12
350.0	7.642	34.163	26.674	141.77	0.672	0.10
400.0	7.131	34.181	26.761	133.98	0.740	0.04
450.0	6.701	34.194	26.830	127.86	0.806	-.01
500.0	6.279	34.199	26.890	122.51	0.869	-.06
550.0	5.765	34.212	26.965	115.45	0.928	-.12
600.0	5.393	34.222	27.018	110.57	0.985	-.15
650.0	5.275	34.264	27.067	106.49	1.039	-.13
700.0	4.945	34.317	27.147	99.02	1.090	-.13
750.0	4.755	34.348	27.193	94.91	1.138	-.13
800.0	4.585	34.373	27.232	91.49	1.185	-.13
1000.0	3.880	34.445	27.365	79.49	1.355	-.14
1200.0	3.293	34.508	27.473	69.48	1.502	-.15
1400.0	2.824	34.546	27.547	62.46	1.633	-.17
1600.0	2.524	34.572	27.595	58.17	1.754	-.17
1748.6	2.365	34.585	27.620	56.06	1.838	-.18

STATION: 45

DATE: 8/31/90

1006 GMT

LAT: 36° 58.6 N.

LON: 122° 48.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.516	33.355	24.366	355.19	0.000	1.17
5.0	16.516	33.397	24.398	352.30	0.018	1.21
10.0	15.958	33.349	24.487	343.94	0.035	1.04
15.0	12.831	33.154	24.998	295.39	0.051	0.21
20.0	12.444	33.166	25.081	287.53	0.066	0.14
25.0	11.948	33.228	25.224	274.08	0.080	0.09
30.0	11.878	33.421	25.387	258.71	0.093	0.23
40.0	11.377	33.532	25.566	241.90	0.118	0.22
50.0	11.122	33.567	25.639	235.14	0.142	0.20
60.0	10.978	33.621	25.707	228.93	0.165	0.22
70.0	10.663	33.703	25.827	217.69	0.187	0.23
80.0	10.500	33.739	25.884	212.53	0.209	0.23
100.0	10.274	33.808	25.977	204.08	0.251	0.24
120.0	10.016	33.848	26.052	197.33	0.291	0.23
140.0	9.505	33.843	26.134	189.91	0.330	0.14
160.0	8.974	33.871	26.241	179.94	0.367	0.07
180.0	8.687	33.917	26.323	172.52	0.402	0.06
200.0	8.811	34.036	26.396	165.98	0.436	0.18
250.0	8.437	34.085	26.493	157.59	0.517	0.16
300.0	7.917	34.113	26.594	148.65	0.593	0.10
350.0	7.385	34.160	26.709	138.32	0.665	0.06
400.0	6.979	34.179	26.780	132.03	0.732	0.02
450.0	6.446	34.164	26.840	126.62	0.797	-.07
500.0	5.849	34.164	26.916	119.49	0.858	-.14
550.0	5.558	34.206	26.986	113.25	0.916	-.14
600.0	5.237	34.262	27.068	105.66	0.971	-.14
650.0	5.031	34.304	27.126	100.56	1.023	-.13
700.0	4.873	34.329	27.165	97.23	1.072	-.13
750.0	4.699	34.351	27.201	94.03	1.120	-.13
800.0	4.531	34.377	27.241	90.54	1.166	-.13
1000.0	3.867	34.451	27.371	78.90	1.332	-.14
1200.0	3.344	34.499	27.462	70.68	1.481	-.15
1370.8	2.922	34.533	27.528	64.39	1.596	-.17

STATION: 46

DATE: 8/31/90

0823 GMT

LAT: 36° 59.9 N.

LON: 122° 45.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.5	16.254	33.425	24.480	344.35	0.002	1.17
5.0	16.111	33.406	24.498	342.74	0.017	1.12
10.0	16.003	33.409	24.525	340.35	0.034	1.10
15.0	15.779	33.385	24.556	337.50	0.051	1.02
20.0	14.065	33.331	24.885	306.26	0.067	0.60
25.0	12.957	33.329	25.108	285.18	0.082	0.37
30.0	12.547	33.417	25.257	271.13	0.096	0.36
40.0	11.049	33.305	25.449	253.02	0.122	-.02
50.0	10.579	33.415	25.617	237.19	0.147	-.02
60.0	10.429	33.460	25.678	231.63	0.170	-.01
70.0	9.473	33.344	25.748	225.08	0.193	-.26
80.0	9.799	33.527	25.838	216.80	0.215	-.06
100.0	10.061	33.700	25.929	208.61	0.257	0.12
120.0	9.152	33.600	26.000	202.08	0.299	-.11
140.0	9.256	33.766	26.114	191.71	0.338	0.04
160.0	9.460	33.929	26.209	183.20	0.375	0.20
180.0	9.338	33.973	26.263	178.43	0.412	0.21
200.0	9.165	33.996	26.309	174.38	0.447	0.20
250.0	8.372	34.090	26.508	156.19	0.529	0.15
300.0	7.898	34.127	26.608	147.35	0.605	0.11
350.0	7.498	34.164	26.696	139.64	0.676	0.08
400.0	7.204	34.168	26.741	135.96	0.745	0.04
450.0	6.080	34.133	26.862	124.14	0.811	-.14
500.0	5.691	34.172	26.942	116.83	0.871	-.15
550.0	5.581	34.243	27.012	110.76	0.928	-.11
600.0	5.379	34.280	27.066	106.04	0.982	-.11
650.0	5.215	34.305	27.106	102.73	1.034	-.11
700.0	5.053	34.319	27.136	100.22	1.085	-.12
750.0	4.749	34.351	27.196	94.59	1.133	-.13
800.0	4.504	34.388	27.253	89.40	1.179	-.12
999.1	3.743	34.470	27.398	76.02	1.345	-.14

STATION: 47                      DATE: 8/31/90                      0736 GMT

LAT: 37° 0.9 N.                      LON: 122° 43.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.303	33.408	24.455	346.65	0.000	1.17
5.0	16.259	33.404	24.462	346.12	0.017	1.15
10.0	15.675	33.412	24.600	333.14	0.034	1.02
15.0	14.374	33.362	24.844	310.05	0.050	0.69
20.0	13.250	33.414	25.116	284.31	0.065	0.50
25.0	11.602	33.288	25.334	263.57	0.079	0.07
30.0	11.284	33.323	25.420	255.52	0.092	0.04
40.0	11.179	33.507	25.582	240.33	0.117	0.17
50.0	10.976	33.539	25.644	234.72	0.140	0.15
60.0	10.562	33.573	25.743	225.42	0.163	0.11
70.0	10.578	33.627	25.782	221.94	0.186	0.15
80.0	10.336	33.659	25.850	215.75	0.208	0.13
100.0	10.296	33.756	25.933	208.29	0.250	0.20
120.0	9.884	33.834	26.063	196.25	0.291	0.19
140.0	9.664	33.900	26.152	188.22	0.329	0.21
160.0	9.589	33.942	26.198	184.27	0.366	0.23
180.0	9.216	33.995	26.300	174.87	0.402	0.21
200.0	8.972	34.025	26.363	169.23	0.437	0.19
250.0	8.305	34.110	26.533	153.75	0.517	0.16
300.0	7.646	34.092	26.617	146.35	0.592	0.04
350.0	6.897	34.104	26.732	135.74	0.662	-.05
400.0	6.355	34.141	26.833	126.46	0.728	-.10
450.0	6.082	34.188	26.906	120.02	0.790	-.09
500.0	5.902	34.236	26.967	114.78	0.848	-.08
550.0	5.718	34.255	27.005	111.68	0.905	-.09
600.0	5.386	34.284	27.069	105.85	0.959	-.10
636.7	5.177	34.303	27.108	102.26	0.997	-.11

STATION: 48                      DATE: 8/31/90                      0623 GMT

LAT: 37° 2.2 N.                      LON: 122° 41.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.731	33.424	24.369	354.89	0.000	1.28
5.0	16.661	33.431	24.390	353.00	0.018	1.27
10.0	16.535	33.436	24.424	349.99	0.035	1.24
15.0	16.182	33.434	24.503	342.56	0.053	1.16
20.0	15.123	33.434	24.739	320.22	0.069	0.91
25.0	14.290	33.422	24.909	304.16	0.085	0.72
30.0	13.265	33.405	25.106	285.50	0.100	0.49
40.0	11.129	33.368	25.483	249.73	0.126	0.05
50.0	10.982	33.541	25.644	234.64	0.150	0.16
60.0	10.575	33.627	25.783	221.63	0.173	0.15
70.0	10.457	33.674	25.840	216.41	0.195	0.17
80.0	10.436	33.718	25.878	213.04	0.217	0.20
100.0	10.235	33.727	25.920	209.48	0.259	0.17
120.0	9.813	33.746	26.006	201.63	0.300	0.11
140.0	9.249	33.788	26.132	190.00	0.339	0.05
160.0	9.100	33.903	26.246	179.52	0.376	0.12
180.0	8.934	33.985	26.337	171.25	0.411	0.16
200.0	8.823	34.060	26.414	164.36	0.444	0.20
250.0	8.442	34.082	26.491	157.85	0.525	0.16
300.0	7.721	34.117	26.626	145.57	0.601	0.07
350.0	7.098	34.131	26.726	136.49	0.671	0.00
400.0	6.462	34.134	26.814	128.39	0.737	-.09
450.0	6.129	34.187	26.899	120.77	0.799	-.09
457.3	5.989	34.189	26.918	118.87	0.808	-.10

STATION: 49

DATE: 8/31/90

0548 GMT

LAT: 37° 3.4 N.

LON: 122° 38.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.307	33.416	24.460	346.15	0.000	1.17
5.0	16.033	33.409	24.518	340.88	0.017	1.10
10.0	14.288	33.401	24.892	305.30	0.034	0.71
15.0	12.514	33.396	25.246	271.74	0.048	0.33
20.0	12.232	33.435	25.331	263.83	0.061	0.31
25.0	11.751	33.475	25.452	252.37	0.074	0.25
30.0	11.299	33.507	25.560	242.20	0.087	0.19
40.0	10.854	33.570	25.689	230.14	0.110	0.16
50.0	10.697	33.621	25.757	223.92	0.133	0.17
60.0	10.464	33.669	25.835	216.72	0.155	0.17
70.0	10.314	33.708	25.891	211.55	0.176	0.17
80.0	10.228	33.740	25.932	207.95	0.197	0.18
100.0	10.096	33.789	25.993	202.58	0.238	0.20
120.0	9.795	33.854	26.094	193.33	0.278	0.20
140.0	9.478	33.912	26.192	184.40	0.315	0.19
160.0	9.321	33.951	26.249	179.35	0.351	0.19
180.0	9.063	34.005	26.332	171.78	0.387	0.19
200.0	8.375	34.089	26.506	155.46	0.419	0.15
209.1	8.216	34.102	26.540	152.33	0.433	0.14

STATION: 50                      DATE: 8/31/90                      0448 GMT

LAT: 37° 4.8 N.                      LON: 122° 34.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.137	33.421	24.503	342.09	0.000	1.14
5.0	16.141	33.414	24.497	342.86	0.017	1.13
10.0	15.413	33.400	24.649	328.46	0.034	0.95
15.0	14.939	33.401	24.754	318.65	0.050	0.85
20.0	13.803	33.403	24.995	295.79	0.066	0.60
25.0	13.221	33.409	25.118	284.20	0.080	0.49
30.0	11.969	33.434	25.380	259.35	0.094	0.26
40.0	11.212	33.505	25.575	241.05	0.119	0.17
50.0	10.996	33.626	25.708	228.64	0.142	0.23
60.0	10.824	33.637	25.747	225.09	0.164	0.20
70.0	10.571	33.659	25.809	219.44	0.187	0.18
80.0	10.436	33.695	25.860	214.75	0.208	0.18
97.5	10.215	33.749	25.941	207.45	0.245	0.18

STATION: 51                      DATE: 8/31/90                      0411 GMT

LAT: 37° 6.0 N.                      LON: 122° 31.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	16.065	33.429	24.526	339.95	0.000	1.13
5.0	16.026	33.425	24.532	339.52	0.017	1.11
10.0	15.556	33.399	24.617	331.58	0.034	0.99
15.0	14.365	33.405	24.879	306.71	0.050	0.72
20.0	13.190	33.432	25.141	281.88	0.065	0.50
25.0	12.315	33.450	25.327	264.30	0.078	0.34
30.0	12.046	33.448	25.376	259.75	0.091	0.28
40.0	11.328	33.537	25.579	240.65	0.116	0.22
50.0	11.060	33.627	25.697	229.67	0.139	0.24
60.0	10.705	33.642	25.772	222.72	0.162	0.19
70.0	10.616	33.700	25.833	217.15	0.184	0.22
80.0	10.573	33.712	25.850	215.75	0.206	0.22
95.7	10.255	33.739	25.926	208.81	0.239	0.18

## Monterey Bay

23 - 31 October

This survey was performed aboard the USNS DeSteiguer during the period 23 - 31 October 1990. It was performed in two stages, with 12 CTD stations visited (Figure 4). Table 4 contains a comparison of final CTD salinities with bottle salinities sampled at the same stations and depths.

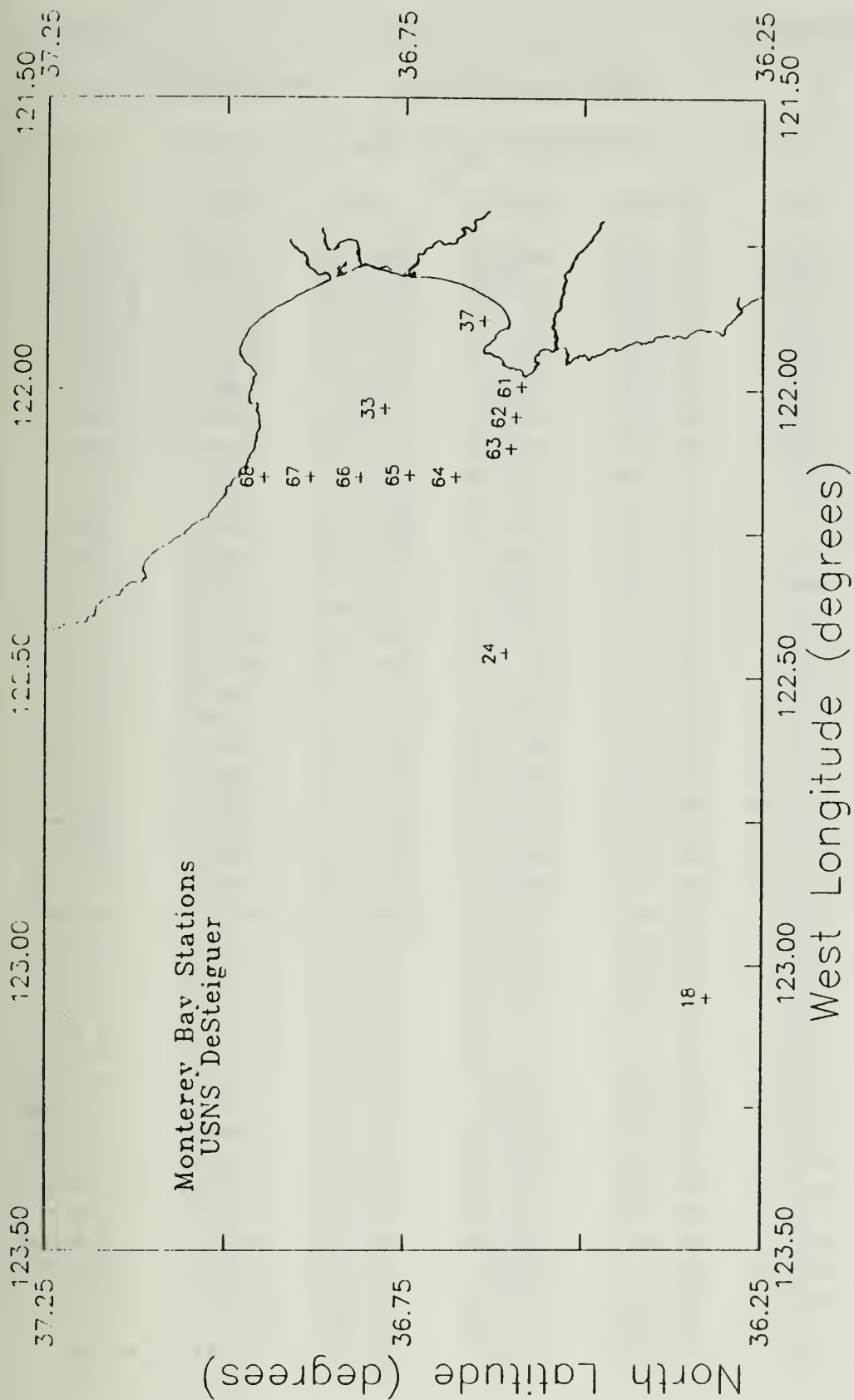
During the period 23 - 24 October, a survey of four stations (Stations 18 and 24 in the Monterey Bay and Stations 33 and 37 offshore along CalCoFI line 67) was made to test the feasibility of conducting a rapid survey within a 24-hour period which could be part of long-term environmental monitoring. The scientific party consisted of Curt Collins (Chief Scientist), Andy Anderson, LT John Cousins, USN, CAPT Jim Dykes, USAF, of the Naval Postgraduate School; and Lou Codispotti, Francisco Chavez, and Jane Kogelschatz of the Monterey Bay Aquarium Research Institute.

On 31 October, a survey of eight stations (Stations 61 - 68 in Monterey Bay) was made as part of an ongoing investigation of the California Undercurrent. The scientific party consisted of Newell Garfield (chief scientist), Andy Anderson, Thomas Rago, and Mike Cook, all of the Naval Postgraduate School.

**Table 4. Comparison of CTD and Bottle Salinity Measurements  
Monterey Bay**

The original data were acquired during the period  
23 - 31 October 1990 aboard the USNS DeSteiguer.  
Salinity values from the corrected CTD file are  
compared with bottle salinities from the same depth.

STATION	PRESSURE (dbar)	SALINITY (psu)		
		CTD	BOTTLE	DIFFERENCE
37	29.0	33.341	33.328	0.013
33	2.2	33.282	33.290	-0.008
33	148.4	33.744	33.848	-0.104
33	296.9	34.122	34.159	-0.037
33	400.2	34.177	34.247	-0.070
33	499.7	34.252	34.309	-0.057
33	598.2	34.302	34.365	-0.063
33	601.0	34.307	34.305	0.002
33	688.1	34.377	34.361	0.016
33	693.6	34.377	34.408	-0.031
33	793.4	34.415	34.405	0.010
24	296.5	34.154	34.147	0.007
24	296.5	34.154	34.146	0.008
24	1485.9	34.545	34.549	-0.004
18	300.2	34.097	34.065	0.032
18	300.2	34.097	34.065	0.032
18	1499.8	34.553	34.559	-0.006
18	2496.2	34.647	34.646	0.001
61	2.5	33.030	33.315	-0.285
61	50.3	33.484	33.460	0.024
62	1.6	33.280	33.273	0.007
63	2.4	33.277	33.284	-0.007
63	998.5	34.447	34.440	0.007
64	2.4	33.053	33.055	-0.002
64	999.9	34.436	34.437	-0.001
65	2.3	33.107	33.058	0.049
65	1000.2	34.460	34.449	0.011
66	2.3	33.029	33.037	-0.008
66	274.7	34.055	34.048	0.007
67	1.4	33.068	33.067	0.001
68	2.5	33.247	33.255	-0.008



**Figure 4. Hydrographic Stations: Monterey Bay**  
Positions shown were occupied by USNS DeSteiguer during the period 23 - 31 October 1990.

# DATA PRESENTATION

STATION: 18

DATE: 10/24/90

0911 GMT

LAT: 36° 19.6 N.

LON: 123° 3.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.853	33.155	24.582	334.54	0.000	0.63
5.0	14.856	33.154	24.581	334.78	0.017	0.63
10.0	14.854	33.155	24.582	334.83	0.033	0.63
15.0	14.856	33.154	24.581	335.08	0.050	0.63
20.0	14.855	33.154	24.582	335.21	0.067	0.63
25.0	14.855	33.153	24.581	335.39	0.084	0.63
30.0	14.850	33.152	24.581	335.51	0.101	0.63
40.0	14.815	33.145	24.584	335.52	0.134	0.62
50.0	13.947	33.064	24.704	324.37	0.167	0.36
60.0	10.762	32.835	25.133	283.42	0.197	-.45
70.0	10.141	32.879	25.274	270.14	0.225	-.52
80.0	9.765	32.992	25.425	255.98	0.251	-.50
100.0	9.489	33.364	25.761	224.37	0.299	-.24
120.0	9.052	33.501	25.939	207.86	0.342	-.21
140.0	8.692	33.674	26.131	189.92	0.382	-.13
160.0	8.266	33.769	26.270	176.98	0.419	-.12
180.0	8.118	33.909	26.402	164.74	0.453	-.03
200.0	7.976	33.970	26.472	158.48	0.485	0.00
250.0	7.438	34.023	26.591	147.76	0.561	-.04
300.0	7.208	34.097	26.683	139.78	0.633	-.01
350.0	6.066	34.031	26.783	130.22	0.700	-.22
400.0	5.996	34.110	26.854	124.12	0.764	-.17
450.0	5.363	34.107	26.929	117.06	0.824	-.25
500.0	4.998	34.129	26.989	111.57	0.881	-.27
550.0	4.804	34.168	27.043	106.86	0.936	-.26
600.0	4.661	34.207	27.090	102.77	0.988	-.25
650.0	4.555	34.256	27.141	98.36	1.038	-.22
700.0	4.467	34.308	27.192	93.94	1.087	-.19
750.0	4.400	34.357	27.239	89.99	1.133	-.16
800.0	4.282	34.387	27.275	86.83	1.177	-.15
1000.0	3.848	34.465	27.384	77.63	1.340	-.13
1200.0	3.388	34.511	27.467	70.35	1.488	-.14
1400.0	2.908	34.540	27.535	63.88	1.622	-.16
1600.0	2.581	34.566	27.585	59.27	1.745	-.17
1800.0	2.275	34.589	27.630	54.92	1.859	-.18
2000.0	2.048	34.610	27.666	51.52	1.966	-.18
2200.0	1.910	34.628	27.692	49.31	2.067	-.18
2400.0	1.823	34.642	27.711	47.95	2.164	-.18
2600.0	1.753	34.651	27.725	47.07	2.259	-.17
2800.0	1.701	34.657	27.735	46.60	2.353	-.18
3000.0	1.630	34.663	27.746	45.82	2.445	-.18
3192.1	1.593	34.668	27.754	45.52	2.532	-.18

STATION: 24

DATE: 10/24/90

0048 GMT

LAT: 36° 36.4 N.

LON: 122° 27.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.100	33.021	24.426	349.46	0.000	0.58
5.0	15.103	33.022	24.426	349.58	0.017	0.58
10.0	15.074	33.020	24.431	349.22	0.035	0.58
15.0	15.087	33.024	24.431	349.37	0.052	0.58
20.0	15.031	33.024	24.444	348.31	0.070	0.57
25.0	14.666	33.007	24.509	342.26	0.087	0.48
30.0	12.316	32.902	24.902	304.85	0.103	-.10
40.0	11.078	32.846	25.086	287.52	0.133	-.38
50.0	10.799	32.889	25.169	279.81	0.161	-.40
60.0	10.554	32.948	25.258	271.56	0.189	-.39
70.0	9.692	33.184	25.586	240.41	0.215	-.35
80.0	9.355	33.222	25.671	232.53	0.238	-.38
100.0	9.343	33.489	25.883	212.85	0.283	-.17
120.0	9.017	33.670	26.076	194.79	0.323	-.08
140.0	8.702	33.792	26.221	181.34	0.361	-.03
160.0	8.483	33.887	26.330	171.39	0.396	0.01
180.0	8.319	33.942	26.398	165.23	0.429	0.03
200.0	8.239	34.005	26.460	159.72	0.462	0.06
250.0	7.849	34.102	26.595	147.67	0.538	0.08
300.0	7.319	34.161	26.718	136.59	0.610	0.05
350.0	6.970	34.183	26.784	130.89	0.676	0.02
400.0	6.524	34.186	26.846	125.38	0.740	-.04
450.0	6.223	34.207	26.903	120.48	0.802	-.06
500.0	5.738	34.220	26.974	113.90	0.861	-.11
550.0	5.387	34.239	27.032	108.63	0.916	-.14
600.0	4.790	34.206	27.075	104.34	0.969	-.23
650.0	4.706	34.267	27.133	99.32	1.020	-.20
700.0	4.812	34.341	27.180	95.65	1.069	-.13
750.0	4.618	34.376	27.230	91.20	1.116	-.12
800.0	4.448	34.396	27.265	88.13	1.161	-.12
1000.0	3.895	34.454	27.370	79.01	1.328	-.14
1200.0	3.398	34.493	27.451	71.79	1.479	-.15
1400.0	3.002	34.533	27.521	65.51	1.617	-.16
1600.0	2.641	34.561	27.576	60.34	1.743	-.17
1800.0	2.346	34.586	27.622	56.00	1.859	-.18
2000.0	2.018	34.617	27.674	50.65	1.966	-.18
2200.0	1.890	34.632	27.697	48.77	2.065	-.18
2400.0	1.801	34.642	27.713	47.64	2.162	-.18
2600.0	1.733	34.651	27.726	46.81	2.256	-.18
2800.0	1.693	34.655	27.734	46.64	2.350	-.18
2947.7	1.680	34.657	27.738	46.79	2.419	-.18

STATION: 33

DATE: 10/23/90

2136 GMT

LAT: 36° 46.7 N.

LON: 122° 2.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.811	33.282	25.100	285.26	0.000	0.30
5.0	12.745	33.277	25.109	284.52	0.014	0.29
10.0	12.295	33.309	25.221	274.01	0.028	0.22
15.0	11.631	33.346	25.374	259.56	0.042	0.12
20.0	11.437	33.380	25.436	253.78	0.054	0.11
25.0	11.339	33.393	25.465	251.17	0.067	0.11
30.0	11.238	33.404	25.491	248.75	0.079	0.10
40.0	11.210	33.430	25.517	246.55	0.104	0.11
50.0	11.094	33.456	25.558	242.87	0.129	0.11
60.0	10.998	33.471	25.587	240.31	0.153	0.10
70.0	10.962	33.488	25.607	238.68	0.177	0.11
80.0	10.880	33.506	25.636	236.12	0.201	0.11
100.0	10.423	33.502	25.713	229.20	0.247	0.02
120.0	10.303	33.625	25.829	218.56	0.292	0.10
140.0	10.047	33.722	25.949	207.53	0.334	0.13
160.0	9.833	33.755	26.011	202.05	0.375	0.12
180.0	9.246	33.843	26.176	186.60	0.414	0.09
200.0	9.063	33.966	26.302	175.03	0.450	0.16
250.0	8.276	34.054	26.494	157.47	0.533	0.11
300.0	7.740	34.122	26.627	145.43	0.609	0.08
350.0	7.247	34.159	26.727	136.49	0.679	0.04
400.0	6.877	34.177	26.793	130.79	0.746	0.00
450.0	6.410	34.200	26.873	123.49	0.810	-.04
500.0	5.824	34.252	26.989	112.63	0.869	-.08
550.0	5.507	34.270	27.042	107.87	0.924	-.10
600.0	5.172	34.306	27.111	101.55	0.977	-.11
650.0	4.787	34.351	27.191	94.05	1.026	-.12
700.0	4.576	34.381	27.238	89.81	1.071	-.12
750.0	4.447	34.395	27.264	87.72	1.116	-.12
800.0	4.179	34.421	27.313	83.08	1.159	-.13
818.1	4.162	34.426	27.319	82.66	1.174	-.13

STATION: 37                      DATE: 10/23/90                      1811 GMT

LAT: 36° 38.4 N.                      LON: 121° 52.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	13.549	33.135	24.839	310.08	0.000	0.34
5.0	13.430	33.198	24.912	303.25	0.015	0.36
10.0	13.423	33.246	24.951	299.74	0.030	0.40
15.0	12.777	33.268	25.096	286.03	0.045	0.28
20.0	11.887	33.308	25.297	267.01	0.059	0.14
25.0	11.753	33.328	25.338	263.21	0.072	0.13
30.0	11.537	33.349	25.394	257.98	0.085	0.11
39.2	11.305	33.380	25.461	251.87	0.109	0.09

STATION: 61                      DATE: 10/31/90                      0611 GMT

LAT: 36° 35.2 N.                      LON: 121° 59.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.694	33.030	24.928	301.67	0.000	0.08
5.0	12.701	33.100	24.981	296.72	0.015	0.14
10.0	12.657	33.214	25.078	287.64	0.030	0.22
15.0	12.086	33.281	25.239	272.44	0.044	0.16
20.0	12.071	33.304	25.259	270.58	0.057	0.17
25.0	12.059	33.316	25.271	269.58	0.071	0.18
30.0	11.955	33.331	25.303	266.68	0.084	0.17
40.0	11.698	33.376	25.386	259.06	0.110	0.16
50.5	11.001	33.484	25.596	239.21	0.137	0.11

STATION: 62

DATE: 10/31/90

0706 GMT

LAT: 36° 35.7 N.

LON: 122° 2.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.881	33.280	25.085	286.71	0.000	0.32
5.0	12.943	33.297	25.086	286.71	0.014	0.34
10.0	12.736	33.298	25.127	282.92	0.029	0.30
15.0	12.418	33.305	25.194	276.67	0.043	0.24
20.0	12.366	33.311	25.209	275.39	0.056	0.24
25.0	12.188	33.299	25.234	273.16	0.070	0.19
30.0	11.992	33.299	25.271	269.76	0.084	0.15
40.0	11.624	33.366	25.392	258.48	0.110	0.14
50.0	11.166	33.452	25.542	244.35	0.135	0.12
60.0	11.021	33.477	25.588	240.24	0.159	0.11
70.0	10.873	33.495	25.628	236.61	0.183	0.10
80.0	10.780	33.515	25.660	233.81	0.207	0.10
100.0	10.357	33.561	25.770	223.76	0.253	0.06
120.0	9.901	33.651	25.918	210.08	0.296	0.05
140.0	9.739	33.723	26.002	202.50	0.338	0.08
160.0	9.564	33.786	26.080	195.45	0.377	0.10
180.0	9.417	33.851	26.155	188.68	0.416	0.13
200.0	9.193	33.915	26.242	180.81	0.453	0.14
250.0	8.437	34.049	26.465	160.26	0.538	0.13
300.0	8.010	34.087	26.560	151.96	0.615	0.09
350.0	7.534	34.116	26.653	143.73	0.689	0.05
400.0	7.023	34.148	26.750	134.94	0.759	0.00
450.0	6.484	34.165	26.836	127.06	0.824	-.06
500.0	6.140	34.198	26.907	120.72	0.886	-.08
550.0	5.701	34.226	26.984	113.60	0.944	-.11
600.0	5.421	34.259	27.044	108.17	1.000	-.12
650.0	5.219	34.289	27.092	103.98	1.053	-.12
700.0	5.039	34.321	27.139	99.90	1.104	-.12
750.0	4.875	34.345	27.177	96.62	1.153	-.12
800.0	4.501	34.386	27.251	89.51	1.199	-.13
978.2	3.834	34.456	27.378	77.95	1.348	-.14

STATION: 63

DATE: 10/31/90

0806 GMT

LAT: 36° 36.1 N.

LON: 122° 6.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.187	33.277	24.818	312.14	0.000	0.59
5.0	14.116	33.282	24.836	310.51	0.016	0.57
10.0	13.691	33.266	24.912	303.42	0.031	0.47
15.0	13.315	33.243	24.970	298.04	0.046	0.37
20.0	13.115	33.245	25.012	294.21	0.061	0.33
25.0	12.536	33.261	25.137	282.34	0.075	0.23
30.0	12.455	33.269	25.160	280.36	0.089	0.22
40.0	12.148	33.264	25.215	275.33	0.117	0.16
50.0	10.492	33.069	25.362	261.39	0.144	-.31
60.0	10.731	33.252	25.463	252.03	0.169	-.12
70.0	9.942	33.151	25.520	246.79	0.194	-.34
80.0	10.247	33.362	25.634	236.24	0.219	-.12
100.0	10.321	33.489	25.720	228.47	0.265	0.00
120.0	10.026	33.597	25.855	216.04	0.310	0.03
140.0	9.719	33.696	25.983	204.22	0.352	0.06
160.0	9.371	33.806	26.127	190.93	0.391	0.09
180.0	9.250	33.880	26.205	183.93	0.429	0.12
200.0	9.129	33.933	26.266	178.49	0.465	0.15
250.0	8.342	34.067	26.494	157.48	0.549	0.13
300.0	7.630	34.068	26.600	147.87	0.626	0.02
350.0	6.881	34.049	26.690	139.63	0.697	-.10
400.0	6.703	34.131	26.779	131.86	0.765	-.06
450.0	6.402	34.163	26.845	126.13	0.830	-.07
500.0	6.021	34.198	26.922	119.13	0.891	-.09
550.0	5.751	34.227	26.979	114.17	0.950	-.11
600.0	5.464	34.251	27.033	109.30	1.006	-.12
650.0	5.164	34.290	27.100	103.22	1.059	-.13
700.0	5.017	34.333	27.151	98.75	1.109	-.11
750.0	4.859	34.352	27.184	95.91	1.158	-.11
800.0	4.521	34.383	27.247	89.97	1.204	-.13
1000.0	3.926	34.448	27.362	79.81	1.373	-.14
1200.0	3.390	34.499	27.457	71.25	1.524	-.15
1400.0	2.890	34.541	27.538	63.60	1.658	-.16
1481.3	2.797	34.550	27.553	62.33	1.709	-.17

STATION: 64

DATE: 10/31/90

1436 GMT

LAT: 36° 40.7 N.

LON: 122° 9.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	13.825	33.053	24.720	321.47	0.000	0.33
5.0	13.824	33.053	24.720	321.59	0.016	0.33
10.0	13.766	33.056	24.734	320.36	0.032	0.32
15.0	12.787	33.063	24.935	301.33	0.048	0.12
20.0	12.301	33.095	25.054	290.10	0.063	0.05
25.0	12.194	33.116	25.090	286.79	0.077	0.05
30.0	12.088	33.103	25.101	285.92	0.091	0.02
40.0	11.976	33.101	25.120	284.33	0.120	-.01
50.0	11.530	33.305	25.362	261.58	0.147	0.07
60.0	10.768	33.436	25.601	238.99	0.172	0.03
70.0	10.482	33.525	25.720	227.83	0.196	0.05
80.0	10.406	33.571	25.769	223.42	0.218	0.08
100.0	10.206	33.618	25.840	217.05	0.262	0.08
120.0	10.033	33.662	25.904	211.37	0.305	0.08
140.0	9.715	33.746	26.024	200.41	0.346	0.10
160.0	9.453	33.847	26.146	189.17	0.385	0.13
180.0	9.139	33.918	26.252	179.35	0.422	0.14
200.0	8.945	33.960	26.316	173.64	0.457	0.14
250.0	8.379	34.049	26.474	159.37	0.541	0.12
300.0	7.614	34.074	26.607	147.20	0.618	0.03
350.0	7.083	34.140	26.735	135.63	0.689	0.00
400.0	6.633	34.144	26.799	129.93	0.755	-.06
450.0	6.181	34.183	26.889	121.75	0.818	-.09
500.0	5.751	34.207	26.962	115.04	0.877	-.12
550.0	5.579	34.241	27.011	110.92	0.934	-.11
600.0	5.334	34.279	27.070	105.62	0.988	-.11
650.0	5.182	34.296	27.102	103.02	1.040	-.12
700.0	5.023	34.326	27.145	99.32	1.091	-.11
750.0	4.890	34.347	27.177	96.66	1.140	-.11
800.0	4.633	34.373	27.227	92.06	1.187	-.12
1000.0	4.028	34.436	27.343	81.92	1.358	-.14
1142.1	3.515	34.484	27.433	73.41	1.469	-.15

STATION: 65

DATE: 10/31/90

1611 GMT

LAT: 36° 44.6 N.

LON: 122° 9.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.404	33.107	24.641	328.97	0.000	0.50
5.0	14.384	33.108	24.646	328.64	0.016	0.49
10.0	14.307	33.137	24.685	325.09	0.033	0.50
15.0	13.577	33.155	24.849	309.57	0.049	0.36
20.0	11.759	33.007	25.087	286.94	0.064	-.12
25.0	10.965	32.917	25.161	280.01	0.078	-.34
30.0	10.711	32.959	25.239	272.72	0.091	-.36
40.0	10.548	33.069	25.352	262.11	0.118	-.30
50.0	11.115	33.414	25.521	246.33	0.144	0.08
60.0	10.576	33.537	25.713	228.34	0.167	0.08
70.0	10.578	33.556	25.727	227.18	0.190	0.10
80.0	10.527	33.584	25.758	224.45	0.213	0.11
100.0	10.150	33.641	25.868	214.46	0.256	0.09
120.0	9.993	33.683	25.927	209.20	0.299	0.09
140.0	9.737	33.756	26.027	200.05	0.340	0.11
160.0	9.533	33.817	26.109	192.63	0.379	0.12
180.0	9.438	33.844	26.146	189.53	0.417	0.13
200.0	9.185	33.918	26.245	180.45	0.454	0.14
250.0	8.458	34.075	26.483	158.62	0.539	0.15
300.0	7.846	34.118	26.608	147.28	0.615	0.09
350.0	6.896	34.069	26.704	138.34	0.687	-.08
400.0	6.338	34.071	26.780	131.44	0.754	-.15
450.0	6.349	34.158	26.848	125.78	0.818	-.08
500.0	6.054	34.198	26.918	119.59	0.879	-.09
550.0	5.760	34.230	26.980	114.05	0.938	-.10
600.0	5.347	34.276	27.067	105.98	0.993	-.12
650.0	5.111	34.302	27.115	101.66	1.045	-.12
700.0	4.925	34.332	27.161	97.66	1.095	-.12
750.0	4.804	34.361	27.198	94.55	1.143	-.11
800.0	4.615	34.376	27.231	91.63	1.189	-.12
1000.0	3.831	34.460	27.382	77.80	1.357	-.14
1120.1	3.452	34.488	27.442	72.21	1.446	-.15

STATION: 66

DATE: 10/31/90

1730 GMT

LAT: 36° 48.7 N.

LON: 122° 9.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.137	33.029	24.637	329.38	0.000	0.38
5.0	13.750	33.049	24.732	320.41	0.016	0.31
10.0	13.661	33.058	24.757	318.16	0.032	0.30
15.0	12.600	33.012	24.931	301.70	0.048	0.05
20.0	11.108	32.879	25.105	285.22	0.062	-0.35
25.0	10.688	32.921	25.213	275.07	0.076	-0.39
30.0	10.286	32.972	25.321	264.82	0.090	-0.42
40.0	10.263	33.191	25.496	248.43	0.116	-0.25
50.0	10.537	33.470	25.667	232.44	0.139	0.02
60.0	10.520	33.538	25.723	227.33	0.162	0.07
70.0	10.454	33.571	25.760	224.01	0.185	0.09
80.0	10.398	33.580	25.778	222.59	0.207	0.08
100.0	10.130	33.643	25.873	213.95	0.251	0.09
120.0	9.974	33.687	25.934	208.58	0.293	0.09
140.0	9.864	33.727	25.984	204.21	0.334	0.11
160.0	9.752	33.756	26.025	200.70	0.375	0.11
180.0	9.480	33.828	26.127	191.35	0.414	0.12
200.0	8.992	33.942	26.294	175.71	0.452	0.13
250.0	8.262	34.047	26.490	157.79	0.533	0.10
275.1	8.109	34.055	26.520	155.36	0.572	0.08

STATION: 67

DATE: 10/31/90

1818 GMT

LAT: 36° 52.9 N.

LON: 122° 9.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.4	13.178	33.061	24.856	308.45	0.001	0.20
5.0	13.062	33.075	24.891	305.33	0.015	0.19
10.0	13.028	33.080	24.901	304.46	0.031	0.19
15.0	12.045	33.136	25.134	282.41	0.045	0.04
20.0	12.115	33.238	25.200	276.25	0.059	0.13
25.0	12.012	33.293	25.262	270.46	0.073	0.15
30.0	11.919	33.309	25.293	267.67	0.086	0.15
40.0	11.359	33.353	25.430	254.82	0.113	0.08
50.0	10.924	33.380	25.529	245.58	0.138	0.02
60.0	10.711	33.437	25.611	237.99	0.162	0.02
70.0	10.605	33.487	25.669	232.74	0.185	0.05
77.1	10.517	33.520	25.710	228.96	0.202	0.06

STATION: 68

DATE: 10/31/90

1906 GMT

LAT: 36° 56.8 N.

LON: 122° 9.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.8	13.182	33.213	24.973	297.34	0.002	0.32
5.0	12.960	33.261	25.055	289.68	0.015	0.32
10.0	12.629	33.315	25.161	279.69	0.029	0.29
15.0	11.899	33.321	25.305	266.13	0.042	0.15
20.0	11.726	33.332	25.346	262.37	0.056	0.13
25.0	11.559	33.345	25.387	258.55	0.069	0.11
29.3	11.452	33.355	25.414	256.05	0.080	0.10

## Central California

18 -22 October

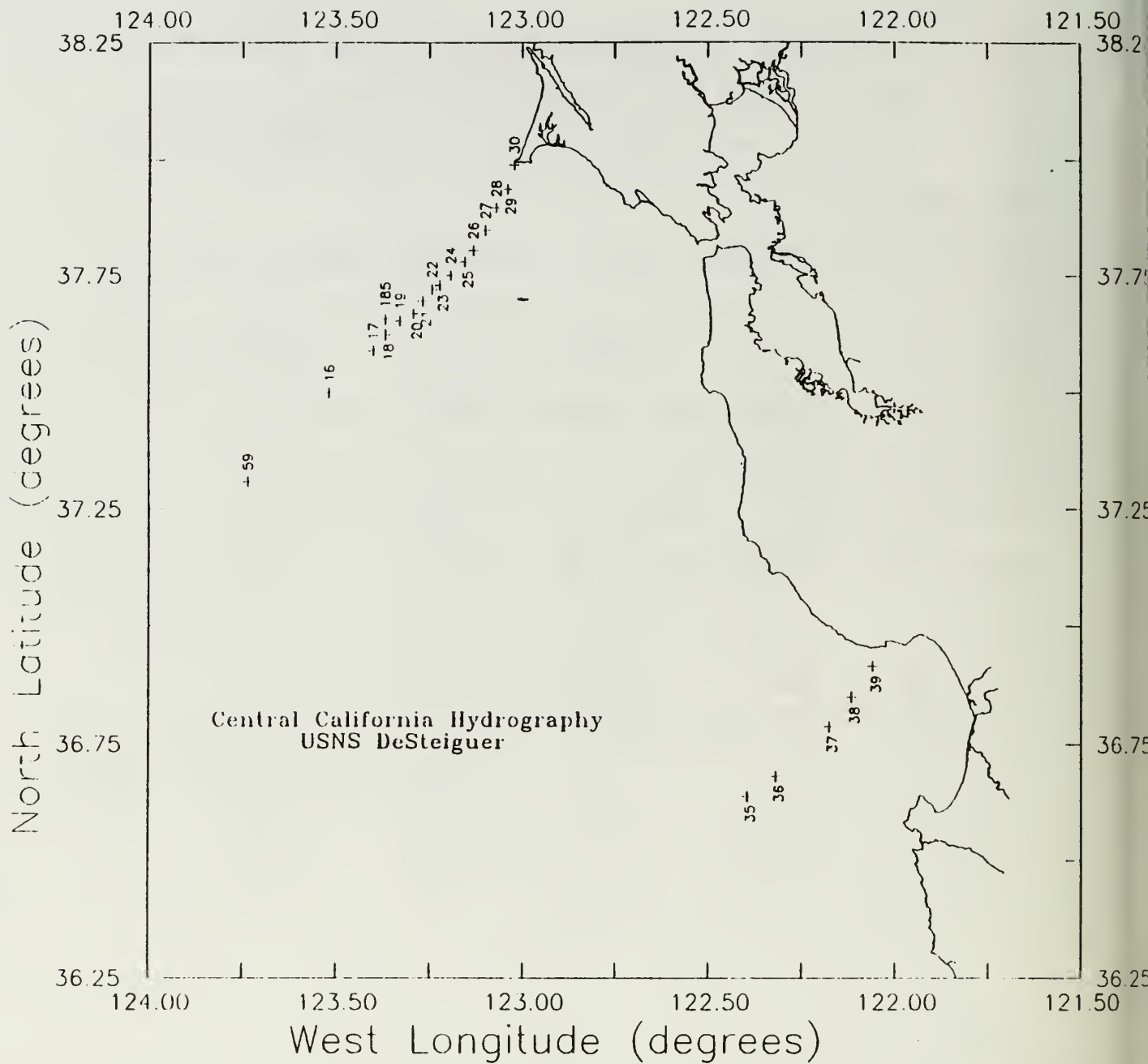
This survey was performed aboard the USNS DeSteiguer during the period 18 October through 1 November 1990. The survey consisted of 22 CTD casts off the central California coast (Figure 5). The CTD temperature calibration coefficient is 0.999668 (slope) with an intercept of 0.0048447; the pressure calibration coefficient is 0.99951 with intercepts determined by individual casts as described earlier (p4). Table 5 contains a comparison of final CTD salinities with bottle salinities sampled at the same stations and depths.

The scientific party consisted of Newell Garfield (chief scientist), Andy Anderson, Thomas Rago, and Mike Cook, all of the Naval Postgraduate School.

**Table 5. Comparison of CTD and Bottle Salinity Measurements  
Central California**

The original data were acquired during the period from 18 - 22 October 1990 aboard the USNS DeSteiguer. Salinity values from the corrected CTD file are compared with bottle salinities from the same depth.

STATION	PRESSURE (dbar)	SALINITY (psu)		
		CTD	BOTTLE	DIFFERENCE
30	6.8	33.209	33.244	-0.035
28	6.8	33.308	33.310	-0.002
22	998.7	34.422	34.422	0.000
21	1005.0	34.426	34.429	-0.003
21	1381.3	34.515	34.518	-0.003
185	7.2	33.308	33.183	0.125
185	1005.0	34.451	34.441	0.010
185	1498.0	34.541	34.537	0.004
185	2551.0	34.649	34.652	-0.003
18	994.2	34.440	34.445	-0.005
17	1000.0	34.436	34.427	0.009
16	8.3	33.043	32.972	0.071
16	1008.0	34.455	34.450	0.005
16	2000.1	34.604	34.607	-0.003
59	1003.9	34.454	34.440	0.014
19	992.8	34.437	34.423	0.014
20	1010.7	34.454	34.448	0.006
20	2062.9	34.624	34.620	0.004
35	1003.1	34.448	34.444	0.004
36	999.3	34.436	34.431	0.005
36	1392.5	34.525	34.527	-0.002
36	1392.5	34.526	34.527	-0.001
39	37.5	33.331	33.287	0.044



**Figure 5. Hydrographic Stations: Central California**  
Positions shown were occupied by USNS DeSteiguer  
during the period 18 - 22 October 1990.

# DATA PRESENTATION

STATION: 16

DATE: 10/20/90

0736 GMT

LAT: 37° 29.9 N.

LON: 123° 31.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_{\theta}(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.629	33.033	24.942	300.25	0.000	0.07
5.0	12.609	33.045	24.956	299.10	0.015	0.07
10.0	12.588	33.044	24.959	298.92	0.030	0.07
15.0	12.588	33.044	24.959	299.03	0.045	0.07
20.0	12.588	33.044	24.960	299.12	0.060	0.07
25.0	12.587	33.050	24.964	298.83	0.075	0.07
30.0	12.567	33.072	24.985	296.96	0.090	0.09
40.0	11.475	33.229	25.313	265.97	0.118	0.00
50.0	11.484	33.356	25.409	257.02	0.144	0.10
60.0	11.128	33.396	25.505	248.09	0.169	0.07
70.0	10.270	33.473	25.715	228.26	0.193	-.02
80.0	9.760	33.553	25.864	214.30	0.215	-.05
100.0	9.360	33.663	26.016	200.22	0.257	-.03
120.0	9.248	33.803	26.144	188.44	0.295	0.06
140.0	8.736	33.872	26.279	175.93	0.331	0.04
160.0	8.393	33.940	26.385	166.11	0.365	0.04
180.0	8.001	33.951	26.453	159.93	0.398	-.01
200.0	7.693	33.963	26.507	155.01	0.430	-.05
250.0	7.251	34.018	26.614	145.53	0.504	-.07
300.0	6.969	34.086	26.707	137.36	0.575	-.06
350.0	6.515	34.119	26.794	129.53	0.641	-.09
400.0	5.847	34.085	26.853	124.06	0.705	-.20
450.0	5.463	34.103	26.915	118.54	0.766	-.24
500.0	5.241	34.153	26.981	112.70	0.824	-.22
550.0	5.217	34.226	27.041	107.55	0.879	-.17
600.0	4.970	34.262	27.099	102.38	0.931	-.17
650.0	4.842	34.300	27.144	98.54	0.981	-.15
700.0	4.729	34.327	27.179	95.62	1.030	-.15
750.0	4.540	34.349	27.217	92.24	1.077	-.15
800.0	4.385	34.380	27.259	88.56	1.122	-.14
1000.0	3.814	34.452	27.377	78.19	1.288	-.15
1200.0	3.302	34.498	27.464	70.28	1.436	-.16
1400.0	2.909	34.530	27.527	64.63	1.571	-.17
1600.0	2.608	34.555	27.574	60.39	1.695	-.18
1800.0	2.332	34.586	27.623	55.85	1.812	-.18
2000.0	2.130	34.604	27.655	52.98	1.921	-.18
2200.0	1.924	34.624	27.688	49.79	2.023	-.18
2400.0	1.811	34.638	27.709	48.07	2.121	-.18
2600.0	1.742	34.647	27.723	47.21	2.216	-.18
2708.1	1.700	34.656	27.734	46.36	2.267	-.18

STATION: 17

DATE: 10/20/90

0536 GMT

LAT: 37° 35.3 N.

LON: 123° 24.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.340	32.999	24.972	297.48	0.000	-.02
5.0	12.341	33.000	24.972	297.54	0.015	-.02
10.0	12.344	33.000	24.972	297.70	0.030	-.01
15.0	12.346	32.999	24.971	297.92	0.045	-.02
20.0	12.347	32.999	24.971	298.06	0.060	-.02
25.0	12.266	33.121	25.081	287.70	0.074	0.07
30.0	11.603	33.244	25.300	266.91	0.088	0.04
40.0	11.082	33.253	25.402	257.45	0.114	-.05
50.0	10.691	33.339	25.538	244.70	0.139	-.06
60.0	10.363	33.413	25.653	233.99	0.163	-.06
70.0	10.108	33.456	25.730	226.86	0.186	-.07
80.0	9.910	33.497	25.795	220.82	0.209	-.07
100.0	9.277	33.680	26.042	197.68	0.251	-.03
120.0	9.008	33.825	26.199	183.17	0.289	0.04
140.0	8.887	33.918	26.292	174.74	0.324	0.10
160.0	8.545	33.922	26.348	169.68	0.359	0.05
180.0	8.124	33.940	26.426	162.54	0.392	0.00
200.0	7.712	33.975	26.514	154.39	0.424	-.04
250.0	7.216	34.037	26.634	143.63	0.498	-.06
300.0	6.778	34.052	26.706	137.30	0.568	-.11
350.0	6.267	34.053	26.774	131.19	0.635	-.18
400.0	6.315	34.117	26.819	127.73	0.700	-.12
450.0	6.101	34.201	26.914	119.30	0.762	-.08
500.0	5.602	34.210	26.983	112.89	0.820	-.14
550.0	5.214	34.230	27.045	107.21	0.875	-.17
600.0	5.033	34.276	27.103	102.11	0.927	-.15
650.0	4.885	34.298	27.138	99.20	0.978	-.15
700.0	4.764	34.333	27.180	95.63	1.026	-.14
750.0	4.663	34.374	27.224	91.88	1.073	-.12
800.0	4.497	34.378	27.246	90.03	1.119	-.13
1000.0	3.949	34.436	27.350	80.99	1.289	-.14
1200.0	3.400	34.491	27.450	71.95	1.441	-.16
1400.0	2.968	34.529	27.521	65.40	1.578	-.17
1600.0	2.541	34.565	27.588	58.85	1.702	-.18
1800.0	2.232	34.593	27.637	54.12	1.814	-.18
2000.0	2.016	34.608	27.667	51.28	1.920	-.19
2107.1	1.957	34.619	27.681	50.19	1.974	-.18

STATION: 185

DATE: 10/19/90

2153 GMT

LAT: 37° 39.4 N.

LON: 123° 22.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.482	33.304	25.181	277.56	0.000	0.25
5.0	12.485	33.305	25.182	277.62	0.014	0.26
10.0	12.486	33.308	25.183	277.57	0.028	0.26
15.0	12.487	33.306	25.182	277.82	0.042	0.26
20.0	12.480	33.304	25.182	277.99	0.056	0.25
25.0	12.368	33.281	25.185	277.77	0.069	0.21
30.0	11.660	33.186	25.245	272.15	0.083	0.00
40.0	9.972	33.069	25.450	252.78	0.109	-.40
50.0	9.704	33.190	25.589	239.78	0.134	-.35
60.0	9.674	33.327	25.701	229.32	0.157	-.24
70.0	9.631	33.412	25.775	222.50	0.180	-.18
80.0	9.174	33.431	25.864	214.21	0.201	-.24
100.0	8.977	33.512	25.959	205.53	0.243	-.21
120.0	8.794	33.738	26.165	186.37	0.282	-.06
140.0	8.509	33.840	26.289	174.90	0.318	-.02
160.0	8.324	33.919	26.379	166.67	0.352	0.01
180.0	8.156	33.962	26.439	161.32	0.385	0.02
200.0	7.919	33.997	26.501	155.66	0.417	0.01
250.0	7.419	34.043	26.610	145.98	0.492	-.03
300.0	6.935	34.048	26.682	139.71	0.564	-.09
350.0	6.847	34.132	26.761	132.97	0.632	-.04
400.0	6.554	34.174	26.833	126.64	0.697	-.04
450.0	6.165	34.187	26.894	121.21	0.760	-.08
500.0	5.696	34.177	26.945	116.58	0.819	-.15
550.0	5.483	34.224	27.009	110.98	0.876	-.14
600.0	5.269	34.263	27.066	105.96	0.930	-.13
650.0	4.941	34.295	27.129	100.06	0.982	-.15
700.0	4.851	34.339	27.174	96.26	1.031	-.12
750.0	4.712	34.367	27.213	93.00	1.079	-.12
800.0	4.553	34.375	27.237	90.96	1.125	-.13
1000.0	3.884	34.448	27.367	79.31	1.296	-.14
1200.0	3.426	34.494	27.450	72.05	1.448	-.15
1400.0	2.961	34.529	27.522	65.32	1.585	-.17
1600.0	2.627	34.560	27.577	60.24	1.711	-.17
1800.0	2.322	34.588	27.626	55.57	1.827	-.18
2000.0	2.108	34.608	27.660	52.42	1.935	-.18
2200.0	1.947	34.625	27.687	49.99	2.037	-.18
2400.0	1.817	34.640	27.710	48.00	2.135	-.18
2550.4	1.743	34.649	27.724	46.91	2.206	-.18

STATION: 18

DATE: 10/20/90

0148 GMT

LAT: 37° 37.4 N.

LON: 123° 22.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.200	32.996	24.996	295.17	0.000	-.05
5.0	12.190	33.015	25.012	293.71	0.015	-.03
10.0	12.187	33.018	25.016	293.52	0.029	-.03
15.0	12.186	33.019	25.017	293.56	0.044	-.03
20.0	12.188	33.020	25.017	293.63	0.059	-.03
25.0	12.169	33.016	25.018	293.72	0.073	-.04
30.0	11.852	32.985	25.053	290.48	0.088	-.12
40.0	10.155	32.940	25.319	265.24	0.115	-.47
50.0	10.292	33.159	25.467	251.45	0.141	-.27
60.0	10.821	33.405	25.567	242.20	0.166	0.02
70.0	10.598	33.454	25.645	235.03	0.190	0.02
80.0	10.456	33.505	25.709	229.11	0.213	0.03
100.0	9.727	33.618	25.921	209.33	0.257	0.00
120.0	9.466	33.795	26.103	192.44	0.297	0.09
140.0	8.640	33.778	26.220	181.42	0.335	-.05
160.0	8.432	33.875	26.328	171.49	0.370	-.01
180.0	8.183	33.922	26.403	164.69	0.404	-.01
200.0	7.952	33.953	26.462	159.41	0.436	-.02
250.0	7.532	34.029	26.583	148.62	0.513	-.02
300.0	6.862	34.043	26.688	139.10	0.585	-.10
350.0	6.552	34.082	26.761	132.72	0.653	-.12
400.0	6.443	34.183	26.855	124.48	0.716	-.05
450.0	6.114	34.201	26.912	119.54	0.777	-.08
500.0	5.592	34.198	26.975	113.69	0.836	-.15
550.0	5.322	34.212	27.018	109.86	0.891	-.17
600.0	5.185	34.228	27.047	107.53	0.946	-.17
650.0	4.966	34.272	27.108	102.11	0.998	-.16
700.0	4.853	34.317	27.157	97.90	1.048	-.14
750.0	4.753	34.358	27.201	94.16	1.096	-.12
800.0	4.585	34.383	27.240	90.76	1.142	-.12
1000.0	3.897	34.442	27.361	79.92	1.313	-.15
1200.0	3.427	34.492	27.448	72.20	1.466	-.15
1400.0	2.920	34.529	27.525	64.82	1.602	-.17
1600.0	2.547	34.566	27.588	58.86	1.726	-.17
1800.0	2.316	34.585	27.624	55.72	1.841	-.18
2000.0	2.084	34.607	27.661	52.19	1.949	-.18
2019.1	2.081	34.608	27.662	52.16	1.958	-.18

STATION: 19

DATE: 10/21/90

0130 GMT

LAT: 37° 39.2 N.

LON: 123° 19.7 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	14.771	33.404	24.792	314.59	0.000	0.81
5.0	14.771	33.403	24.791	314.80	0.016	0.81
10.0	14.771	33.403	24.791	314.93	0.031	0.81
15.0	14.770	33.402	24.791	315.11	0.047	0.81
20.0	14.773	33.400	24.789	315.44	0.063	0.81
25.0	14.732	33.397	24.795	315.00	0.079	0.80
30.0	14.241	33.371	24.880	307.09	0.094	0.67
40.0	10.407	33.287	25.547	243.61	0.122	-.15
50.0	10.128	33.325	25.624	236.49	0.146	-.17
60.0	9.747	33.364	25.719	227.67	0.169	-.20
70.0	9.263	33.395	25.821	218.06	0.191	-.26
80.0	9.056	33.499	25.935	207.39	0.212	-.21
100.0	9.474	33.761	26.074	194.73	0.253	0.07
120.0	9.079	33.820	26.184	184.64	0.290	0.05
140.0	8.792	33.910	26.300	173.92	0.326	0.08
160.0	8.587	33.966	26.376	167.06	0.360	0.09
180.0	8.509	34.043	26.449	160.53	0.393	0.14
200.0	8.178	34.042	26.498	156.07	0.424	0.08
250.0	7.309	34.015	26.604	146.53	0.500	-.06
300.0	6.902	34.047	26.686	139.33	0.572	-.10
350.0	6.509	34.066	26.754	133.36	0.640	-.13
400.0	6.512	34.165	26.832	126.76	0.704	-.06
450.0	6.262	34.181	26.877	122.96	0.767	-.08
500.0	5.895	34.196	26.936	117.66	0.827	-.11
550.0	5.627	34.220	26.988	113.09	0.885	-.13
600.0	5.303	34.260	27.059	106.60	0.940	-.13
650.0	5.022	34.304	27.127	100.42	0.991	-.13
700.0	4.811	34.334	27.175	96.13	1.041	-.13
750.0	4.644	34.376	27.227	91.50	1.088	-.12
800.0	4.483	34.397	27.262	88.48	1.133	-.12
1000.0	3.981	34.442	27.352	80.92	1.303	-.14
1200.0	3.441	34.496	27.450	72.08	1.455	-.15
1400.0	2.953	34.538	27.529	64.57	1.591	-.16
1600.0	2.601	34.563	27.582	59.70	1.717	-.17
1800.0	2.339	34.587	27.623	55.87	1.833	-.18
2000.0	2.045	34.613	27.669	51.28	1.939	-.18
2200.0	1.892	34.631	27.696	48.87	2.040	-.18
2400.0	1.784	34.643	27.715	47.35	2.137	-.18
2403.9	1.790	34.642	27.714	47.52	2.139	-.18

STATION: 20

DATE: 10/21/90

0353 GMT

LAT: 37° 40.1 N.

LON: 123° 17.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.4	14.736	33.110	24.573	335.47	0.001	0.57
5.0	14.700	33.247	24.686	324.82	0.016	0.67
10.0	14.705	33.252	24.689	324.63	0.033	0.68
15.0	14.709	33.257	24.692	324.53	0.049	0.68
20.0	14.708	33.260	24.695	324.41	0.065	0.68
25.0	14.669	33.259	24.703	323.80	0.081	0.68
30.0	13.743	33.236	24.878	307.20	0.097	0.46
40.0	10.603	33.160	25.414	256.27	0.125	-.21
50.0	10.260	33.209	25.511	247.26	0.150	-.24
60.0	10.079	33.275	25.593	239.63	0.174	-.22
70.0	9.577	33.300	25.696	229.98	0.197	-.28
80.0	9.303	33.339	25.771	223.00	0.220	-.30
100.0	9.210	33.573	25.969	204.61	0.263	-.12
120.0	9.087	33.715	26.100	192.56	0.302	-.03
140.0	9.019	33.888	26.247	179.02	0.339	0.09
160.0	8.548	33.958	26.376	167.08	0.374	0.07
180.0	8.581	34.049	26.442	161.18	0.406	0.15
200.0	7.923	33.977	26.485	157.21	0.438	-.01
250.0	7.846	34.139	26.624	144.89	0.513	0.11
300.0	7.451	34.147	26.688	139.48	0.584	0.06
350.0	7.045	34.149	26.747	134.44	0.652	0.00
400.0	6.634	34.156	26.809	129.03	0.718	-.05
450.0	6.249	34.178	26.876	122.99	0.781	-.08
500.0	5.873	34.193	26.936	117.62	0.841	-.12
550.0	5.585	34.214	26.989	112.98	0.899	-.14
600.0	5.245	34.260	27.066	105.85	0.954	-.14
650.0	5.004	34.303	27.128	100.28	1.005	-.13
700.0	4.844	34.327	27.166	97.05	1.054	-.13
750.0	4.660	34.348	27.203	93.76	1.102	-.14
800.0	4.566	34.371	27.232	91.41	1.148	-.13
1000.0	3.893	34.446	27.364	79.57	1.318	-.14
1200.0	3.388	34.498	27.456	71.30	1.468	-.15
1400.0	2.920	34.539	27.533	64.10	1.602	-.16
1600.0	2.517	34.570	27.594	58.21	1.724	-.17
1800.0	2.213	34.596	27.641	53.68	1.836	-.18
2000.0	2.001	34.618	27.676	50.37	1.941	-.18
2073.6	1.934	34.624	27.687	49.41	1.978	-.18

STATION: 21

DATE: 10/19/90

1006 GMT

LAT: 37° 41.7 N.

LON: 123° 16.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.336	33.226	25.148	280.65	0.000	0.16
5.0	12.334	33.225	25.148	280.82	0.014	0.16
10.0	12.335	33.222	25.146	281.15	0.028	0.16
15.0	12.337	33.212	25.137	282.07	0.042	0.15
20.0	12.337	33.208	25.135	282.46	0.056	0.15
25.0	12.338	33.207	25.134	282.63	0.070	0.15
30.0	12.335	33.208	25.136	282.63	0.085	0.15
40.0	12.269	33.273	25.198	276.91	0.113	0.19
50.0	10.096	33.121	25.470	251.09	0.139	-.34
60.0	9.384	33.188	25.640	235.10	0.163	-.40
70.0	9.300	33.349	25.780	222.02	0.186	-.29
80.0	9.417	33.431	25.825	217.94	0.208	-.20
100.0	9.241	33.558	25.953	206.13	0.250	-.13
120.0	9.130	33.682	26.068	195.63	0.290	-.05
140.0	8.758	33.709	26.147	188.36	0.329	-.09
160.0	8.656	33.879	26.297	174.54	0.365	0.03
180.0	8.678	33.942	26.343	170.56	0.399	0.08
200.0	8.174	33.960	26.434	162.13	0.433	0.02
250.0	7.926	34.036	26.531	153.70	0.511	0.04
300.0	7.776	34.143	26.638	144.40	0.586	0.10
350.0	7.265	34.150	26.717	137.44	0.657	0.03
400.0	6.618	34.134	26.793	130.46	0.724	-.07
450.0	6.248	34.161	26.863	124.23	0.787	-.09
500.0	5.824	34.186	26.937	117.51	0.848	-.13
550.0	5.399	34.223	27.018	110.00	0.905	-.15
600.0	5.175	34.241	27.059	106.41	0.959	-.16
650.0	4.988	34.276	27.108	102.11	1.011	-.16
700.0	4.875	34.313	27.151	98.47	1.061	-.14
750.0	4.743	34.328	27.178	96.25	1.110	-.14
800.0	4.586	34.346	27.210	93.52	1.157	-.15
1000.0	4.043	34.425	27.332	82.92	1.332	-.14
1200.0	3.516	34.479	27.429	74.22	1.489	-.15
1383.9	3.120	34.515	27.496	68.13	1.620	-.16

STATION: 22

DATE: 10/19/90

0811 GMT

LAT: 37° 43.2 N.

LON: 123° 14.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.481	33.202	25.102	285.06	0.000	0.17
5.0	12.480	33.204	25.104	284.99	0.014	0.18
10.0	12.481	33.205	25.105	285.07	0.029	0.18
15.0	12.484	33.207	25.106	285.10	0.043	0.18
20.0	12.486	33.208	25.106	285.19	0.057	0.18
25.0	12.338	33.184	25.116	284.34	0.071	0.13
30.0	12.147	33.180	25.150	281.28	0.085	0.09
40.0	11.402	33.137	25.254	271.53	0.113	-.09
50.0	10.723	33.181	25.410	256.90	0.140	-.18
60.0	10.270	33.236	25.531	245.58	0.165	-.21
70.0	9.892	33.258	25.611	238.07	0.189	-.26
80.0	9.410	33.237	25.674	232.25	0.212	-.36
100.0	9.471	33.589	25.940	207.44	0.256	-.07
120.0	9.592	33.696	26.004	201.77	0.297	0.04
140.0	9.368	33.748	26.082	194.78	0.336	0.04
160.0	9.251	33.814	26.153	188.41	0.375	0.07
180.0	8.992	33.923	26.279	176.75	0.411	0.12
200.0	8.527	33.918	26.348	170.40	0.446	0.04
250.0	8.115	34.039	26.506	156.20	0.527	0.07
300.0	7.953	34.126	26.599	148.20	0.603	0.12
350.0	7.160	34.112	26.702	138.77	0.675	-.01
400.0	6.719	34.131	26.777	132.07	0.742	-.06
450.0	6.312	34.150	26.846	125.92	0.807	-.09
500.0	5.871	34.177	26.924	118.80	0.868	-.13
550.0	5.642	34.204	26.974	114.48	0.926	-.14
600.0	5.286	34.242	27.047	107.73	0.982	-.15
650.0	5.081	34.278	27.100	103.07	1.034	-.14
700.0	4.898	34.313	27.148	98.77	1.085	-.14
750.0	4.699	34.341	27.193	94.77	1.133	-.14
800.0	4.548	34.368	27.232	91.42	1.180	-.13
1000.0	4.045	34.426	27.333	82.87	1.354	-.14
1200.0	3.573	34.472	27.418	75.42	1.513	-.15
1347.4	3.289	34.503	27.471	70.79	1.621	-.16

STATION: 23

DATE: 10/19/90

0653 GMT

LAT: 37° 43.7 N.

LON: 123° 13.3 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.389	33.244	25.152	280.29	0.000	0.19
5.0	12.386	33.241	25.151	280.55	0.014	0.19
10.0	12.391	33.247	25.154	280.34	0.028	0.19
15.0	12.390	33.252	25.159	280.03	0.042	0.20
20.0	12.310	33.269	25.188	277.43	0.056	0.19
25.0	12.170	33.282	25.224	274.07	0.070	0.18
30.0	12.126	33.291	25.239	272.74	0.083	0.17
40.0	10.330	33.193	25.486	249.36	0.110	-.24
50.0	9.965	33.254	25.596	239.10	0.134	-.25
60.0	9.638	33.343	25.720	227.54	0.157	-.24
70.0	9.773	33.419	25.757	224.19	0.180	-.15
80.0	9.814	33.530	25.837	216.84	0.202	-.06
100.0	9.833	33.681	25.952	206.37	0.244	0.06
120.0	9.514	33.719	26.035	198.85	0.285	0.04
140.0	9.296	33.762	26.104	192.65	0.324	0.04
160.0	9.193	33.862	26.199	183.99	0.362	0.10
180.0	8.996	33.925	26.280	176.66	0.398	0.12
200.0	8.560	33.955	26.372	168.20	0.432	0.07
250.0	8.310	34.067	26.499	156.99	0.513	0.12
300.0	7.800	34.118	26.615	146.62	0.588	0.09
350.0	7.241	34.122	26.699	139.15	0.660	0.01
400.0	6.730	34.138	26.781	131.70	0.727	-.05
450.0	6.271	34.167	26.865	124.10	0.791	-.09
500.0	5.824	34.187	26.938	117.45	0.852	-.13
550.0	5.470	34.214	27.002	111.55	0.909	-.15
600.0	5.300	34.242	27.046	107.88	0.964	-.15
650.0	5.118	34.280	27.097	103.39	1.017	-.14
700.0	4.941	34.306	27.138	99.80	1.067	-.14
750.0	4.725	34.336	27.187	95.45	1.116	-.14
800.0	4.528	34.362	27.229	91.62	1.163	-.14
1000.0	3.970	34.430	27.344	81.68	1.335	-.15
1046.0	3.763	34.450	27.381	78.11	1.372	-.15

STATION: 24

DATE: 10/19/90

0530 GMT

LAT: 37° 45.0 N.

LON: 123° 11.5 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.537	33.149	25.050	290.00	0.000	0.14
5.0	12.531	33.152	25.054	289.80	0.015	0.14
10.0	12.483	33.166	25.074	287.99	0.029	0.15
15.0	12.444	33.176	25.090	286.62	0.043	0.15
20.0	12.235	33.198	25.146	281.36	0.057	0.12
25.0	12.222	33.234	25.177	278.55	0.071	0.15
30.0	12.107	33.305	25.254	271.34	0.085	0.18
40.0	11.673	33.306	25.336	263.80	0.112	0.10
50.0	10.008	33.193	25.541	244.34	0.138	-.29
60.0	9.701	33.242	25.630	236.05	0.162	-.31
70.0	9.176	33.366	25.813	218.85	0.184	-.29
80.0	9.300	33.467	25.872	213.47	0.206	-.19
100.0	9.499	33.622	25.961	205.44	0.248	-.04
120.0	9.625	33.795	26.076	194.98	0.288	0.12
140.0	9.265	33.807	26.144	188.82	0.327	0.07
160.0	9.126	33.882	26.226	181.44	0.364	0.11
180.0	9.051	33.946	26.289	175.90	0.399	0.14
200.0	8.901	33.953	26.318	173.48	0.434	0.13
250.0	8.293	34.070	26.503	156.57	0.516	0.12
300.0	7.776	34.085	26.593	148.72	0.592	0.06
350.0	7.388	34.101	26.661	142.80	0.665	0.01
400.0	6.932	34.126	26.745	135.32	0.734	-.03
450.0	6.544	34.143	26.811	129.49	0.801	-.07
500.0	5.889	34.189	26.931	118.13	0.862	-.12
541.4	5.549	34.219	26.997	112.07	0.910	-.14

STATION: 25                      DATE: 10/19/90                      0430 GMT

LAT: 37° 46.7 N.                      LON: 123° 9.3 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.533	33.143	25.046	290.37	0.000	0.14
5.0	12.460	33.144	25.062	289.04	0.014	0.12
10.0	12.455	33.150	25.067	288.67	0.029	0.13
15.0	12.350	33.198	25.125	283.29	0.043	0.14
20.0	11.605	33.153	25.229	273.45	0.057	-.04
25.0	11.110	33.227	25.376	259.54	0.070	-.07
30.0	10.336	33.332	25.593	238.98	0.083	-.12
40.0	9.658	33.345	25.718	227.34	0.106	-.23
50.0	9.739	33.542	25.858	214.18	0.128	-.06
60.0	9.751	33.554	25.866	213.68	0.150	-.05
61.7	9.732	33.549	25.865	213.78	0.153	-.06

STATION: 26                      DATE: 10/19/90                      0353 GMT

LAT: 37° 48.2 N.                      LON: 123° 7.9 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.6	12.370	33.124	25.063	288.81	0.002	0.09
5.0	12.220	33.131	25.097	285.67	0.014	0.07
10.0	12.039	33.131	25.131	282.53	0.029	0.03
15.0	11.907	33.159	25.178	278.23	0.043	0.03
20.0	11.667	33.173	25.233	273.04	0.056	-.01
25.0	11.454	33.189	25.285	268.28	0.070	-.04
30.0	11.414	33.187	25.291	267.83	0.083	-.04
40.0	11.037	33.228	25.391	258.53	0.110	-.08
50.0	10.535	33.247	25.494	248.92	0.135	-.16
60.0	10.049	33.314	25.629	236.23	0.159	-.19
70.0	10.014	33.397	25.700	229.71	0.183	-.13

STATION: 27                      DATE: 10/19/90                      0253 GMT

LAT: 37° 50.8 N.                      LON: 123° 6.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.694	33.281	25.122	283.16	0.000	0.28
5.0	12.689	33.283	25.124	283.07	0.014	0.28
10.0	12.437	33.304	25.190	276.97	0.028	0.25
15.0	12.069	33.341	25.289	267.68	0.042	0.20
20.0	12.009	33.343	25.301	266.59	0.055	0.19
25.0	11.977	33.349	25.312	265.69	0.068	0.19
30.0	11.906	33.363	25.337	263.48	0.082	0.19
40.0	11.628	33.370	25.394	258.26	0.108	0.14
50.0	11.295	33.391	25.471	251.10	0.133	0.10
60.0	10.432	33.375	25.612	237.91	0.158	-.07
70.3	9.558	33.392	25.771	222.85	0.181	-.21

STATION: 28                      DATE: 10/19/90                      0148 GMT

LAT: 37° 53.7 N.                      LON: 123° 4.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.124	33.322	25.263	269.73	0.000	0.20
5.0	12.060	33.315	25.270	269.19	0.013	0.18
10.0	11.805	33.337	25.335	263.18	0.027	0.15
15.0	11.295	33.343	25.433	253.91	0.040	0.06
20.0	11.241	33.350	25.449	252.54	0.052	0.05
25.0	11.151	33.362	25.474	250.24	0.065	0.05
30.0	10.983	33.379	25.517	246.25	0.077	0.03
40.0	10.369	33.363	25.612	237.39	0.102	-.09
50.0	10.254	33.512	25.748	224.68	0.125	0.00
60.0	10.044	33.553	25.816	218.44	0.147	0.00
70.0	10.054	33.596	25.848	215.60	0.168	0.04
75.5	10.009	33.598	25.858	214.84	0.180	0.03

STATION: 29                      DATE: 10/18/90                      2223 GMT

LAT: 37° 56.2 N.                      LON: 123° 2.4 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.531	33.272	25.147	280.82	0.000	0.24
5.0	12.436	33.285	25.175	278.20	0.014	0.23
10.0	12.106	33.290	25.242	272.02	0.028	0.17
15.0	12.024	33.288	25.256	270.76	0.041	0.15
20.0	11.729	33.268	25.295	267.15	0.055	0.08
25.0	11.023	33.326	25.468	250.79	0.068	-0.01
30.0	10.134	33.362	25.652	233.43	0.080	-0.14
40.0	10.240	33.503	25.744	224.92	0.103	-0.01
50.0	10.163	33.533	25.780	221.64	0.125	0.00
55.7	10.224	33.562	25.793	220.60	0.138	0.04

STATION: 30                      DATE: 10/18/90                      2123 GMT

LAT: 37° 59.3 N.                      LON: 123° 1.3 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.541	33.205	25.093	285.94	0.000	0.19
5.0	12.454	33.200	25.106	284.81	0.014	0.17
10.0	12.149	33.269	25.217	274.35	0.028	0.16
15.0	11.274	33.322	25.420	255.13	0.041	0.04
20.0	11.123	33.338	25.460	251.45	0.054	0.02
23.8	11.016	33.351	25.490	248.74	0.064	0.01

STATION: 35

DATE: 10/22/90

0118 GMT

LAT: 36° 38.3 N.

LON: 122° 23.8 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	15.146	33.018	24.413	350.64	0.000	0.59
5.0	15.139	33.019	24.416	350.55	0.018	0.59
10.0	14.985	33.025	24.454	347.07	0.035	0.56
15.0	13.993	33.103	24.724	321.50	0.052	0.41
20.0	13.608	33.179	24.862	308.49	0.067	0.38
25.0	13.470	33.192	24.900	304.97	0.083	0.37
30.0	13.466	33.193	24.902	304.95	0.098	0.37
40.0	12.378	33.258	25.166	279.96	0.128	0.20
50.0	12.122	33.276	25.229	274.20	0.156	0.16
60.0	11.818	33.316	25.318	266.02	0.182	0.13
70.0	11.303	33.392	25.471	251.63	0.208	0.10
80.0	10.578	33.447	25.642	235.47	0.233	0.01
100.0	9.302	33.471	25.874	213.61	0.278	-.19
120.0	8.986	33.664	26.076	194.80	0.319	-.09
140.0	8.800	33.813	26.223	181.25	0.356	0.00
160.0	8.629	33.969	26.372	167.45	0.391	0.10
180.0	8.429	33.992	26.421	163.13	0.424	0.08
200.0	8.128	34.027	26.494	156.49	0.456	0.06
250.0	7.621	34.110	26.634	143.83	0.531	0.06
300.0	7.273	34.120	26.692	139.00	0.601	0.01
350.0	7.077	34.177	26.764	132.82	0.669	0.03
400.0	6.554	34.175	26.834	126.58	0.734	-.04
450.0	6.087	34.167	26.888	121.70	0.796	-.11
500.0	5.236	34.091	26.932	117.27	0.856	-.27
550.0	4.993	34.134	26.994	111.65	0.913	-.27
600.0	4.863	34.185	27.050	106.80	0.968	-.24
650.0	5.047	34.276	27.102	102.82	1.020	-.15
700.0	4.953	34.327	27.154	98.39	1.070	-.12
750.0	4.726	34.356	27.202	93.97	1.118	-.12
800.0	4.533	34.381	27.244	90.27	1.164	-.13
1000.0	3.928	34.448	27.362	79.84	1.333	-.14
1200.0	3.434	34.495	27.450	72.07	1.485	-.15
1400.0	3.025	34.527	27.514	66.22	1.623	-.16
1600.0	2.691	34.554	27.567	61.44	1.751	-.17
1800.0	2.252	34.592	27.635	54.44	1.867	-.18
2000.0	2.053	34.608	27.664	51.74	1.973	-.18
2058.1	1.977	34.618	27.678	50.32	2.003	-.18

STATION: 36

DATE: 10/22/90

0406 GMT

LAT: 36° 40.9 N.

LON: 122° 19.2 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.799	33.205	25.043	290.71	0.000	0.24
5.0	12.834	33.203	25.034	291.65	0.015	0.24
10.0	12.786	33.209	25.049	290.38	0.029	0.24
15.0	12.545	33.238	25.118	283.93	0.043	0.21
20.0	12.188	33.242	25.190	277.21	0.058	0.15
25.0	12.111	33.261	25.219	274.56	0.071	0.15
30.0	12.087	33.270	25.230	273.61	0.085	0.15
40.0	11.973	33.303	25.278	269.32	0.112	0.15
50.0	11.515	33.340	25.391	258.74	0.139	0.10
60.0	10.988	33.308	25.462	252.20	0.164	-.03
70.0	10.193	33.338	25.624	236.97	0.189	-.15
80.0	9.853	33.448	25.767	223.54	0.212	-.12
100.0	9.676	33.564	25.887	212.52	0.255	-.05
120.0	9.282	33.670	26.034	198.89	0.296	-.04
140.0	9.105	33.820	26.180	185.40	0.334	0.05
160.0	8.973	33.894	26.259	178.24	0.371	0.09
180.0	8.746	33.992	26.372	167.88	0.405	0.13
200.0	8.354	34.000	26.439	161.74	0.438	0.08
250.0	8.100	34.118	26.570	150.13	0.516	0.13
300.0	7.391	34.079	26.643	143.68	0.589	0.00
350.0	7.273	34.169	26.731	136.11	0.659	0.05
400.0	5.934	34.018	26.789	130.17	0.726	-.25
450.0	5.724	34.087	26.871	122.98	0.789	-.22
500.0	5.472	34.141	26.944	116.39	0.849	-.21
550.0	5.275	34.215	27.026	109.04	0.906	-.17
600.0	5.201	34.274	27.082	104.31	0.959	-.13
650.0	5.002	34.289	27.117	101.29	1.011	-.15
700.0	4.832	34.324	27.165	97.14	1.060	-.14
750.0	4.671	34.363	27.214	92.79	1.108	-.12
800.0	4.519	34.381	27.245	90.10	1.153	-.13
1000.0	4.000	34.436	27.345	81.59	1.325	-.14
1200.0	3.405	34.494	27.452	71.80	1.477	-.15
1393.4	3.019	34.526	27.514	66.18	1.610	-.16

STATION: 37

DATE: 10/22/90

0723 GMT

LAT: 36° 47.3 N.

LON: 122° 10.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.238	33.252	25.187	276.95	0.000	0.17
5.0	12.187	33.254	25.199	276.00	0.014	0.16
10.0	11.829	33.266	25.275	268.80	0.027	0.10
15.0	11.593	33.290	25.338	262.98	0.041	0.07
20.0	11.256	33.313	25.417	255.60	0.054	0.03
25.0	11.010	33.338	25.480	249.65	0.066	0.00
30.0	10.914	33.362	25.517	246.30	0.079	0.00
40.0	10.805	33.398	25.564	242.03	0.103	0.01
50.0	10.708	33.417	25.596	239.23	0.127	0.01
60.0	10.606	33.479	25.662	233.13	0.151	0.04
70.0	10.497	33.514	25.709	228.93	0.174	0.05
80.0	10.393	33.562	25.764	223.86	0.197	0.07
100.0	10.308	33.590	25.801	220.78	0.241	0.07
120.0	9.937	33.692	25.944	207.63	0.284	0.09
140.0	9.745	33.756	26.026	200.16	0.325	0.11
160.0	9.380	33.859	26.167	187.14	0.364	0.13
180.0	9.106	33.941	26.275	177.19	0.400	0.15
200.0	8.827	33.978	26.349	170.50	0.435	0.13
250.0	8.476	34.085	26.488	158.16	0.517	0.16
300.0	7.247	34.038	26.631	144.69	0.594	-.06
350.0	6.504	34.034	26.729	135.69	0.664	-.16
400.0	6.560	34.167	26.827	127.23	0.729	-.05
450.0	5.975	34.172	26.906	119.87	0.791	-.12
500.0	5.650	34.235	26.997	111.67	0.848	-.11
550.0	5.370	34.267	27.056	106.34	0.903	-.12
600.0	5.251	34.288	27.087	103.88	0.955	-.12
620.2	5.157	34.300	27.108	102.05	0.976	-.12

STATION: 38

DATE: 10/22/90

0853 GMT

LAT: 36° 51.0 N.

LON: 122° 7.0 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	13.003	33.225	25.018	293.05	0.000	0.30
5.0	13.003	33.225	25.018	293.18	0.015	0.30
10.0	12.997	33.225	25.019	293.19	0.029	0.30
15.0	12.901	33.229	25.042	291.17	0.044	0.28
20.0	12.610	33.248	25.113	284.51	0.058	0.24
25.0	11.953	33.307	25.284	268.35	0.072	0.15
30.0	11.937	33.321	25.298	267.13	0.085	0.16
40.0	11.210	33.396	25.490	249.06	0.111	0.08
50.0	11.111	33.409	25.518	246.62	0.136	0.08
60.0	10.707	33.442	25.616	237.51	0.160	0.03
70.0	10.500	33.516	25.710	228.82	0.184	0.05
80.0	10.347	33.563	25.773	223.04	0.206	0.06
91.1	10.191	33.624	25.847	216.18	0.231	0.08

STATION: 39

DATE: 10/22/90

0953 GMT

LAT: 36° 54.9 N.

LON: 122° 3.6 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta(\text{kg m}^{-3})$	$\delta$	$\Sigma\Delta D$	$\pi$
0.0	12.730	33.251	25.092	286.04	0.000	0.26
5.0	12.730	33.251	25.092	286.16	0.014	0.26
10.0	12.317	33.234	25.158	279.96	0.029	0.17
15.0	11.642	33.246	25.295	267.09	0.042	0.05
20.0	11.197	33.253	25.381	258.99	0.055	-.03
25.0	11.146	33.265	25.400	257.30	0.068	-.03
30.0	11.144	33.281	25.412	256.25	0.081	-.02
35.7	11.142	33.331	25.452	252.62	0.096	0.02

STATION: 59

DATE: 10/20/90

1606 GMT

LAT: 37° 18.5 N.

LON: 123° 44.1 W.

P(dbar)	T(°C)	S(psu)	$\gamma_\theta$ (kg m <sup>-3</sup> )	$\delta$	$\Sigma\Delta D$	$\pi$
0.1	13.130	33.036	24.847	309.38	0.000	0.17
5.0	13.131	33.036	24.846	309.54	0.015	0.17
10.0	13.132	33.034	24.845	309.78	0.031	0.17
15.0	13.131	33.034	24.845	309.88	0.046	0.17
20.0	13.134	33.034	24.845	310.08	0.062	0.17
25.0	13.134	33.033	24.844	310.27	0.077	0.17
30.0	13.083	33.036	24.856	309.23	0.093	0.16
40.0	10.413	33.029	25.344	262.86	0.122	-.35
50.0	9.968	33.161	25.523	246.08	0.147	-.33
60.0	9.725	33.344	25.706	228.84	0.171	-.22
70.0	9.562	33.446	25.813	218.90	0.193	-.17
80.0	9.328	33.528	25.915	209.38	0.215	-.14
100.0	8.773	33.622	26.077	194.33	0.255	-.16
120.0	8.733	33.769	26.198	183.15	0.292	-.04
140.0	8.496	33.880	26.322	171.77	0.328	0.01
160.0	8.474	33.936	26.370	167.57	0.361	0.05
180.0	8.094	33.975	26.458	159.48	0.394	0.02
200.0	7.834	34.005	26.520	153.83	0.425	0.00
250.0	7.286	34.046	26.631	143.94	0.500	-.04
300.0	6.728	34.060	26.719	136.06	0.570	-.11
350.0	6.180	34.050	26.783	130.29	0.637	-.19
400.0	5.852	34.122	26.882	121.41	0.700	-.17
450.0	5.631	34.184	26.958	114.63	0.759	-.15
500.0	5.435	34.219	27.010	110.17	0.815	-.15
550.0	5.228	34.261	27.068	105.09	0.869	-.14
600.0	5.040	34.280	27.106	101.87	0.920	-.15
650.0	4.873	34.315	27.152	97.80	0.970	-.14
700.0	4.689	34.342	27.195	94.07	1.018	-.14
750.0	4.488	34.360	27.232	90.79	1.065	-.15
800.0	4.325	34.385	27.269	87.48	1.109	-.14
1000.0	3.798	34.453	27.379	77.93	1.274	-.15
1200.0	3.321	34.502	27.466	70.22	1.422	-.15
1400.0	2.941	34.532	27.526	64.86	1.557	-.17
1600.0	2.595	34.561	27.580	59.80	1.682	-.17
1800.0	2.304	34.583	27.623	55.73	1.797	-.18
2000.0	2.075	34.607	27.662	52.08	1.905	-.18
2200.0	1.913	34.625	27.690	49.57	2.006	-.18
2400.0	1.814	34.637	27.708	48.19	2.104	-.18
2600.0	1.763	34.645	27.719	47.64	2.200	-.18
2780.1	1.697	34.652	27.731	46.84	2.285	-.18

## REFERENCES

Churgin, J. and S.J. Halminski, 1974: Temperature, Salinity, Oxygen, and Phosphate in Waters off United States. Vol. 3, U.S. Department of Commerce NOAA Environmental Data Service, 258pp.

Flament, P., 1986: A Note on Seawater Spiciness and Diffusive Stability. Personal Communication.

Gezgin, E., 1991: A Study on Hydrographic Conditions and Salt Budget Calculations for the Gulf of Farallones With the Data Collected in August 1990. Masters Thesis, US Naval Postgraduate School.

Lewis, E.L. and R.G. Perkin, 1981: The Practical Salinity Scale 1978: Conversion of Existing Data. Deep Sea Res., **28A**, 307-328.

UNESCO, 1987: International Oceanographic Tables, Vol.4, National Institute of Oceanography of Great Britain and UNESCO (Paris).

# INITIAL DISTRIBUTION LIST

1. Naval Postgraduate School  
Department of Oceanography  
Monterey, CA 93943  
  
Dr. Curtis A. Collins 1  
Dr. Newell Garfield 1  
Dr. Steve Ramp 1  
Mr. Paul F. Jessen 1  
Mr. Thomas A. Rago 20  
Mr. John Locke 2
2. Dudley Knox Library (Code 0142) 2  
Naval Postgraduate School  
Monterey, CA 93943
3. Research Administration (Code 012) 1  
Naval Postgraduate School  
Monterey, CA 93943
4. Monterey Bay Aquarium Research Institute  
160 Central Avenue  
Pacific Grove, CA 93950  
  
Dr. Francisco Chavez 1  
Dr. Leslie Rosenfeld 1  
Ms. Carole Sakamoto 1  
Mr. Gernot Friederich 1
5. NOAA/NMFS  
Pacific Fisheries Environmental Group  
P.O. Box 831  
Monterey, CA 93942  
  
Dr. Franklin B. Schwing 1
6. NOAA/NMFS  
Monterey National Marine Sanctuary  
P.O. Box 831  
Monterey, CA 93942  
  
CDR Terry Jackson 1

7. Office of Naval Research (ONR)  
800 N. Quincy St.  
Arlington, VA 22217  
  
Mr. Lou Codispotti 1
8. Scripps Institution of Oceanography  
University of California, San Diego  
La Jolla, CA 92093-0227  
  
Library 1  
Prof. Joe Reid 1  
Dr. Nan Bray 1
9. Marine Biological Laboratory  
Woods Hole, MA 62543  
  
Library 1
10. Moss Landing Marine Laboratory  
Moss Landing CA 95039  
  
Dr. Bill Broenkow 1
11. National Oceanographic Data Center  
NOAA/NESDIS  
8604 La Jolla Shores Drive  
La Jolla, CA 92037  
  
Dr. Norman Hall 1





DUDLEY KNOX LIBRARY



3 2768 00329730 0

U25962